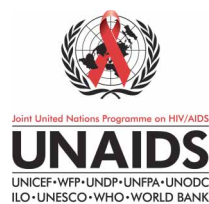
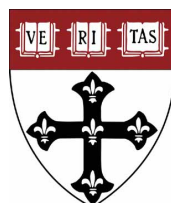


BUSINESS AND HIV/AIDS: WHO ME?

A GLOBAL REVIEW OF
THE BUSINESS RESPONSE
TO HIV/AIDS

2003–2004

Prepared for the World Economic Forum's
Global Health Initiative in partnership with:



We would like to thank Victoria Collis for editorial assistance and extremely helpful comments. We would also like to thank Rozlyn Engel Coleman for assistance initiating this study, and Ajay Mahal and Jaypee Sevilla for their helpful comments and discussions along with their previous work with the authors on the subject of HIV/AIDS, which has proved invaluable for this study. We would also like to thank Larry Rosenberg for editorial assistance and helpful comments; and Elizabeth Ashbourne and Debrework Zewdie (World Bank); Georgiana Braga Orillard, Marika Fahlen, Ben Plumley and Edward Vela (UNAIDS); as well as Neil Bennett, Stefano Bertozzi, Alf Blikberg, Francesca Boldrini, Brian Brink, Jeffrey Kemprecos, William Looney, Trevor Neilson, Jerry Radwin, Steve Simpson, Jonathon Simon, Christopher Sykes and Alan Whiteside for helpful comments and suggestions.

This report was funded in part through a grant provided by UNAIDS.

A shorter version of this report was published on December 1, 2003. This version is available on the World Economic Forum Global Health Initiative's website at www.weforum.org/globalhealth.

Please email the Global Health Initiative at globalhealth@weforum.org for additional data tables and the regression results.

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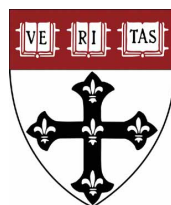
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BUSINESS AND HIV/AIDS: WHO ME?

A GLOBAL REVIEW OF THE BUSINESS RESPONSE TO HIV/AIDS

2003–2004

Edited by Kate Taylor and Peter DeYoung — Global Health Initiative



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Foreword

By Klaus Schwab, Executive Chairman, World Economic Forum



The World Economic Forum is pleased to introduce this survey – the first ever – on the global business response to HIV/AIDS. The findings arrive at a crucial juncture in the global battle against this scourge – an overdue moment of increased attention, funding and efforts to turn the tide.

There are currently 40 million people living with HIV, and thousands more are infected each and every day. Each person infected represents a legacy of failed prevention with which we will have to deal for decades. Although this is a time of great challenge, this is also becoming a time of renewed hope. We are increasingly seeing an important augmentation in the depth and breadth of the responses from governments, business and other members of civil society. Companies like those working with the Forum's Global Health Initiative are already making a difference to the lives of their employees and communities.

As part of our productive collaboration with the Joint United Nations Programme on AIDS (UNAIDS), this exciting project measures the business response to HIV/AIDS across more than 100 countries. In order to ensure a sustainable methodology, we have integrated a HIV/AIDS health component into the World Economic Forum's long-standing Executive Opinion Survey, one of the cornerstones of our *Global Competitiveness Report*, which has been contributing to the international debate since 1979.

Despite the efforts undertaken by a core of leading companies, more needs to be done by the broader business community. This report now arms us with the knowledge to help target and build the next wave of response that is so urgently needed. We hope that the act of asking these questions on this core business survey will help to mainstream HIV/AIDS and

focus executives on the importance of understanding and leading their companies' responses to this disease.

It must be recognized that business' main business is business. That being said, we believe that the role of business will continue to evolve as businesses explore how to best contribute their strengths and capabilities to address areas of greatest need. Just as we desire to see broader business engagement in future surveys, we hope that governments, non-governmental organizations and faith-based organizations will increasingly recognize the potential impact of the private sector response by co-investing and partnering with and supporting businesses' activities.

The Global Health Initiative is an example of the World Economic Forum's portfolio of initiatives that engage business with other stakeholders in work processes on specific global, regional or industry issues. These initiatives are being organized into a new Global Institute for Partnership and Governance to build upon the Forum's capacity to serve as an informal, independent platform for multi-stakeholder partnership in three dimensions: stimulating action, improving governance and expanding understanding through dialogue. In this spirit, we hope that this report will help to stimulate greater public-private discussion on ways to increase effort and partnering against HIV/AIDS the world over.

AIDS is Everybody's Business

By Peter Piot, Executive Director, UNAIDS



More than 20 years have passed since I first saw for myself the cruel impact of AIDS – in the already-full wards of a hospital in Kinshasa, in the then Zaire. No one then could have imagined just how devastating the epidemic would become. Today, there are 40 million people living with AIDS globally, and the epidemic continues to cross new borders. But the past 20 years have not been in vain: we have learned that the epidemic can be curbed when it is subjected to an all-out attack, which mobilizes public and private, town and country, leaders, citizens and family members alike.

Global consensus on the need for comprehensive AIDS responses was sealed at the United Nations General Assembly when its Special Session on AIDS in June 2001 set broad and ambitious targets for the global mobilization against HIV/AIDS. Underpinning these goals was the realization that efforts at the current level were simply inadequate to turn back the epidemic, and that every part of society – from governments of affected countries to civil society, from donors to business – must be involved.

The report published here represents the first global review, setting baseline measures, for the activities of businesses in meeting the globally shared goals of combating AIDS. These results matter. They show that we have a long way to go: the efforts of businesses, large and small, formal and informal, operating in the developing and developed worlds are still far from reaching their full potential impact on the course of the HIV epidemic. To bridge that gap, companies have four key dimensions of action available:

- Businesses in countries where the HIV epidemic is still in its infancy should actively manage risks by investing in HIV/AIDS workplace policies and programmes focusing on prevention.
- Businesses in countries which are already hard-hit by AIDS should protect their investments in human capital by providing employees with access to testing, care, support and treatment for HIV/AIDS as a necessary counterpart to full-scale workplace HIV prevention programmes.
- Leading businesses everywhere should do more by extending HIV/AIDS efforts to families, communities and business partners along their supply chains, alongside community and faith-based organizations, and in close cooperation with governments – integrating an AIDS focus into fundamental considerations of securing the future investment climate.
- All businesses should work to reduce the stigma of HIV/AIDS, as it undermines all other efforts.

Over the past few years, we have learned a lot about what makes corporate sector interventions successful. A key lesson is that companies do not have to embark on this journey alone; private-private and public-private partnerships can enhance effectiveness and sustainability. Working with national, regional and global business alliances – such as the World Economic Forum's Global Health Initiative and the Global Business Coalition on HIV/AIDS – can shorten learning curves and create local synergies. The challenge posed by AIDS is enormous – but failing to meet the challenge is simply not an option.

Making AIDS Your Business

By Mervyn Davies, Group Chief Executive, Standard Chartered Bank



There is a significant economic impact of HIV/AIDS on businesses and economies that business ignores at its own peril. AIDS imposes a day-to-day economic 'tax' that compromises business productivity. This represents sufficient motivation in itself, but at Standard Chartered we firmly believe that responding to HIV/AIDS is a moral necessity that goes beyond corporate social responsibility.

Our initial actions in Africa were driven by a clear business case. For example, in one country we observed that on any given day 10% of our staff were absent because of HIV-related matters. For many of our country operations with long-standing HIV/AIDS programmes, the motivations behind action were driven by a desire to protect basic human rights, preserve the integrity of our labour force, reduce costs associated with HIV/AIDS and respond to what the company regarded as a real challenge.

This is one of the reasons why we have not invested precious programme resources in detailed economic impact assessments but have instead targeted these funds and energies directly into action. Our policy evolved from focused country-level and regional responses to a coordinated global HIV/AIDS policy in 1999.

In many heavily affected countries, we have the privilege of joining forces with a rapidly growing cadre of other businesses, non-governmental organizations and government officials. We salute this growing group of partners and actors for their courage and drive in addressing this pandemic. These efforts have already had a measurable positive impact. However, we cannot rest on our laurels. We need to drive for broader business engagement, especially with smaller businesses. Our customers – both consumers and particularly small and medium enterprises – often remain at risk.

Today, this risk is often ignored in countries where the HIV pandemic has not yet strongly taken hold. Looking towards the future, it is clear that our experiences in Africa may well apply to our operations in other parts of the world. We feel a duty as the world's best international bank leading the way in Asia, Africa and the Middle East to work so that the horrendous impacts currently borne by the highest prevalence countries are averted. Starting or strengthening the country-level response to HIV/AIDS will reduce prevalence and will in turn lead to stronger economies and a more robust bottom line.

This logic led to the global launch of our staff peer education programme "Living with HIV" at the World Economic Forum's East Asia Economic Summit in late 2002. We committed to training all of our 30,000 plus employees in more than 50 countries about the facts of HIV/AIDS, how it spreads, how it can be prevented and how to care for those infected and affected by HIV/AIDS. In every country we have ever-expanding groups of volunteer 'champions', who serve as peer educators, able to spread information and reduce stigma mindful of culturally and country-specific contexts. We were honoured that "Living with HIV" was awarded the Global Business Coalition on HIV/AIDS 2003 Award for Business Excellence in the Workplace.

We believe that large companies have a role and responsibility to set a positive example for other businesses to follow. We call upon other businesses, large and small, to walk with us on this difficult journey to fight HIV/AIDS. It is an investment in our future that we cannot afford to miss. We have seen how employees, their families and the communities in which they live welcome these efforts. This report shows that too few companies have answered this need.

We call on other businesses to develop global policies and to adapt and implement programmes for workers and families in all countries. We also urge you to work with national, regional and global business organizations, such as the World Economic Forum's Global Health Initiative, to share the best practices and networks needed to shortcut the learning curve for effective programmes. We believe that business can significantly contribute to the fight to save the lives of tens of millions of people. This fight against HIV/AIDS is one that needs to be fought and won, each and every day.

AIDS is a Global Business Challenge

By Laura Tyson, Dean, London Business School



The HIV/AIDS epidemic is a human tragedy of epic proportions and global reach. More than 40 million people are now living with HIV/AIDS, and the epidemic continues to grow rapidly in many parts of the world, including China and India, the two largest emerging market economies. A health epidemic of this scale and reach poses significant economic and business risks especially in hard-hit regions like Sub-Saharan Africa, home to roughly two thirds of those with HIV. Several multinational companies with global brand names and operations have identified HIV/AIDS as one of their core business issues and have developed company-wide programmes to respond to the business threats posed by the disease.

Despite some high-profile examples, however, we still know surprisingly little about the impact of HIV/AIDS on individual companies, about how they assess the risks they face, and about how they are responding to these risks. This important new survey conducted by the World Economic Forum in collaboration with the Joint United Nations Program on AIDS begins to address these gaps in our knowledge and establishes baseline measures of how global businesses are responding to the AIDS/HIV epidemic. Overall, the results indicate that there is still considerable work to do.

Only about 20% of the firms surveyed judge HIV/AIDS to pose a serious business threat. Even in countries where HIV/AIDS is prevalent, many firms do not see a significant risk to their performance. Fewer than 20% of the firms surveyed have conducted quantitative studies of HIV prevalence among their workers, and more than 80% have no HIV/AIDS specific written policy. Nonetheless, only about 20% of firms judge their responses to be insufficient or ineffective. Overall the survey results suggest three basic conclusions. First, most companies have poor information on which to assess the actual risks to their business posed by

the epidemic and to design appropriate responses. Second, to date most companies have not developed company-wide policies to contain business risks posed by the epidemic, even when such risks are judged to be substantial. Third, despite their relative inaction, most companies express support for a broad societal response in which the business community can play an integral part.

The findings and conclusions of the survey should encourage more companies to take a close look at the risks posed by the HIV/AIDS epidemic and to study the best-practice examples of successful company programmes to address these risks. Companies can actively manage risks by investing in HIV/AIDS workplace policies and programmes that emphasize education and prevention, by providing employees with access to testing, care, support and treatment for HIV/AIDS, and by reducing the stigma of HIV/AIDS in their corporate cultures. They can also offer their support for community-wide efforts outside the workplace in partnership with other companies, trade associations, or non-governmental organizations.

The World Economic Forum and UNAIDS are to be commended for this important new survey. It should be a call to arms to the business community to redouble its efforts to contain the human and economic costs of the HIV/AIDS epidemic.

Introduction and Executive Summary

Introduction

Business and HIV/AIDS: Who Me? presents findings from the first global survey of business leaders' opinions on and responses to the threat of HIV/AIDS. The report, which was commissioned as part of the 2003/2004 Global Competitiveness Report of the World Economic Forum, is the first of these publications to address HIV/AIDS. Recognition of the virus's importance by this prestigious and wide-ranging study reflects the growing concern of policy-makers and business leaders across the world. HIV/AIDS is increasingly recognized as a potentially serious threat to economies, businesses and communities.

This report provides an analysis of the data collected by the Global Competitiveness Report's Executive Opinion Survey. The survey gathers the opinions of over seven thousand business leaders in 103 countries, tackling such issues as their concerns over HIV/AIDS, their estimates of HIV prevalence within their firms, and their responses to the disease. It allows us to paint a picture of the type of environment that is most vulnerable to serious impacts of HIV/AIDS on businesses and communities. Geographical location, national incomes and quality of governance are all significantly correlated with firms' perceptions of the virus's likely impact. Responses to the survey highlight which factors are seen by business as most important.

The report is divided into three sections. Part 1 assesses the literature on the impact of HIV/AIDS on economies and businesses. It looks at the areas of a business that are most likely to be affected and at how businesses are measuring the effects.

Part 2 discusses the data from the Executive Opinion Survey, focusing on the questions covering HIV/AIDS. It examines firms' estimates of the scale of the epidemic and its impact on their operations; the nature of that impact; the perceived effect on the communities in which business work; and how businesses have responded to the threat. It also looks at how the policy environment faced by a business can have a major effect on how firms perceive the virus.

Finally, in part 3 of the report, we draw out the main conclusions from the data and offer recommendations for future action. We conclude by making recommendations for the content of future Executive Opinion Surveys.

Executive Summary

HIV/AIDS has become a major global policy issue, with United Nations Secretary-General Kofi Annan describing it as, "not only the world's biggest public health challenge, but in some countries the biggest single obstacle to development".¹ *The Global Competitiveness Report 2003-2004* (GCR) addresses HIV/AIDS for the first time. This report analyses the results of the GCR Executive Opinion Survey, which asks 7,789 firms in 103 countries about their concerns over and responses to the threat of the virus.

Part 1 assesses studies of the impact of HIV/AIDS on economies and businesses. From the limited evidence available in the existing literature, the following conclusions can be drawn:

- *Serious macroeconomic impacts are likely to be limited to high HIV prevalence countries.*
- *Individual businesses may see adverse effects in both low- and high-prevalence settings. The effect on the labour force is likely to be most visible and, particularly in hard-hit countries, damaging. The impacts on markets and costs of capital are harder to detect and are likely to be felt, if at all, in the longer term.*
- *For large multinational businesses with high-profile brands and for companies in certain sectors, reputation may be the key driver for action on HIV/AIDS.*

Part 2 discusses the Executive Opinion Survey (EOS) data, focusing on the questions covering HIV/AIDS. Only 13% of firms in the survey have conducted quantitative studies of HIV prevalence levels among their workers. 64% nevertheless provide estimates of infection rates, with the majority reporting lower rates than the UNAIDS estimate of overall prevalence in their countries. The disparity between EOS and UNAIDS estimates is greatest in Africa, where 45% of firms report less than 1% prevalence, despite estimates from UNAIDS that just 10% of respondent firms in Africa are located in such low-prevalence countries. Firms that have carried out quantitative surveys report lower infection rates than other firms.

Despite perceived low infection rates among workers, business leaders nevertheless regard HIV/AIDS as a serious problem and are concerned about its impact on their business:

-
- *The most concerned firms are based in high-prevalence and low-income countries.*
 - *Firms in countries with strong overall governance indicators – including an effective, open and fair national legislative body with a strong focus on improving health, education and poverty reduction; a favourable business environment; and a free press – are less concerned about the threat of HIV/AIDS to their businesses than firms in badly-governed settings.*
 - *Firms show a similar pattern of concern over the virus's impact on their communities.*
 - *Although operating costs are generally not perceived to have increased substantially as a result of the epidemic, firms believe that if their communities are hard hit, they themselves are unlikely to be immune to the effects.*
-

Businesses' response to the epidemic has so far been piecemeal. 83% of firms have no HIV/AIDS-specific written policy. The 6% that do have policies (the remainder do not answer the question) do not always implement them.

-
- *Prevention programmes focus primarily on information provision, with employees the main target. A significant proportion also target employees' dependents and surrounding communities.*
 - *Care, support and treatment programmes target both employees and their dependants with a range of policies including diagnosis and treatment of sexually transmitted diseases, treatment for opportunistic infections and provision of anti-retroviral drugs.*
 - *In countries with high HIV-prevalence and low incomes, many respondents are unsatisfied with their firms' existing policies.*
-

Part 3 of the report summarizes the main findings from the EOS data. It draws three important conclusions. First, businesses are not particularly active in combating HIV/AIDS, even when they are concerned about the epidemic's effect on their business. Second, firms are making decisions on what to do about HIV/AIDS without comprehensive knowledge of the risks they face. Few firms have conducted quantitative studies of HIV prevalence among their workforce and, while many are worried about the epidemic, highlighting specific aspects of a business that are likely to be affected proves difficult. Those firms that do provide estimates of prevalence rates among their workers systematically believe that a smaller proportion of their workforce is infected than national prevalence rates would predict.

The third main finding is that businesses are more sanguine about being able to cope with HIV/AIDS if they believe their countries are generally well governed. Businesses appear to support a broad response to the epidemic, involving private and public sectors and non-governmental organizations. Governments and NGOs are likely to benefit from working in partnership with businesses, providing them with the information they lack and designing incentives to encourage business involvement.

Part 1: Scaling the Problem

A global snapshot

According to UNAIDS, between 34 and 46 million people are now living with HIV/AIDS, with 4.2 to 5.8 million new infections and 2.5 to 3.5 million AIDS deaths in 2003.² The AIDS epidemic is, first and foremost, a human tragedy. But its magnitude also drives profound social and structural changes, leading to predictions of equally profound economic damage. For example, the World Bank recently stated, “The long run economic costs of AIDS are almost certain to be much higher [than other studies have estimated] – and possibly devastating.” In parts of Africa, they add, if effective action is not taken to combat the spread of the epidemic, HIV/AIDS could result in “economic collapse”.³

In this section, we summarize existing research on the past and future economic impact of the AIDS epidemic – on individuals, families and societies. We also explore its impact at a firm level, before examining the increasingly popular notion that the private sector is an important partner in the *response* to the epidemic.

Studies of the economic impact of HIV/AIDS have been undertaken since the onset of the epidemic. However, they have been hampered by a lack of data and by the difficulty of disaggregating the impact of AIDS from the many other influences on economic performance.

These difficulties are pronounced in sub-Saharan Africa, which faces the most serious epidemic, but also experiences a plethora of other pressing problems that limit prospects for economic growth. African economies have performed poorly since the 1970s. Per capita incomes are currently 10% lower than they were in 1980, and GDP growth throughout the 1990s was negative at a regional level, though the performance of some countries such as South Africa was considerably better.⁴ Many factors have been used to explain this disappointing record, such as unfavourable geography, declining terms of trade, poor governance, high levels of conflict, inadequate investment, and low levels of human capital.⁵ Recently, increased attention has been directed to the influence of Africa’s poor health standards on its economic performance, with analysis suggesting that healthy populations are likely to prosper, especially when health improvements occur in a favourable policy environment.

Formal analysis suggests that, if two countries are compared and are identical in every respect other than that one has a five-year advantage in life expectancy, income per capita in the healthier country is likely to grow 0.3-0.5% faster than its counterpart.⁶

- East Asia provides an example of a region where health improvements have made a demonstrable contribution to economic growth, accounting for as much as a third of the East Asian ‘economic miracle’.⁷
- Latin America, by contrast, demonstrates that it is possible for the *potential* impact of health on wealth to be squandered. While it enjoyed similar health and demographic conditions to East Asia, its policy environment was not conducive to growth.
- Africa, meanwhile, suffers from poor health and poor governance. Life expectancy at birth is currently 49 years, compared to 78 years for high-income countries, and infant mortality rates are 18 times higher than in rich countries.⁸ Poorly developed labour markets, low levels of saving and investment, inadequate standards of governance and low educational standards are just some of the factors that magnify the impact of the region’s ill health.⁹

Quantifying the economic impact of specific health problems is more difficult. The Commission on Macroeconomics and Health has attempted to estimate the macroeconomic impact of malaria and HIV/AIDS.¹⁰ It suggests that malaria costs sub-Saharan Africa between 5.8% and 17.4% of annual gross national product (GNP) due solely to lost years of healthy life. AIDS, meanwhile, costs between 11.7 and 35.1% of GNP by the same reckoning. On top of this, it argues that there are significant losses of per capita income, with malaria alone reducing per capita income levels by half over time. The Commission’s report, “Macroeconomics and Health: Investing in Health for Development”, also finds an impact of disease on investment, efficiency, levels of social capital and the effectiveness of government. “The economic costs of avoidable disease, when taken together are staggeringly high,” it argues. “Disease reduces annual incomes of society, the lifetime incomes of individuals and prospects for economic growth. The losses are dozens of percent of GNP of the poorest countries each year, which translates into hundreds of billions of US dollars.” However, despite the Commission’s findings, the goal of determining the magnitude of the economic impact of AIDS has continued to prove elusive.

Macroeconomic losses

The enormity of the HIV/AIDS epidemic has led many sectors of society to examine what effects the epidemic will have on them and to examine how they might be able to alleviate the ongoing humanitarian tragedy. Businesses, like others, have begun to address this question and in some cases to take action. Business can be affected by HIV/AIDS via the epidemic's effect on the macroeconomy and by more direct effects it has on business operations.

A large number of studies have addressed these impacts. For the most part, these studies have been carried out carefully and have expressed reasonable conclusions based on the evidence examined. The nature of the epidemic, however, makes obtaining good data difficult. The uncertainty evident on the macro level (e.g., what is the overall infection rate in a country?) is reflected in a similar uncertainty at the level of an individual business. Infected people will not always identify themselves as such, and many of them do not even know they are infected. Within the inevitable limitations, however, the studies we have reviewed do shed considerable light on the effects HIV/AIDS has had on economies and businesses. They also point to a frightening future that should add urgency to all stakeholders' efforts to combat the disease.

This part of the report offers a representative sample of the conclusions reached by a wide variety of researchers. The broad picture can be seen in the section on macroeconomic losses. Business-specific considerations are covered in the latter sections.

Three main approaches have been used to test the macroeconomic impact of HIV/AIDS:

- First, the 'cost of illness' approach, which multiplies the number of cases of the virus by medical care costs and lost earnings to calculate the total cost to an economy. This approach has tended to overestimate the impact of HIV/AIDS in the developing countries where the disease is most prevalent, as its impact on the labour force in labour surplus economies is difficult to measure.
- Second, the 'production function' approach, which looks at the effect of the disease on labour, skilled labour and capital. AIDS can affect all three of these.
- Third, the 'empirical approach', which asks whether per capita incomes have grown more slowly in countries that have experienced severe HIV/AIDS epidemics.

There remains much uncertainty over the virus's impacts on the macroeconomy. Although there is potential for it to have serious impacts on African countries with high HIV prevalence rates, it is not clear how serious these impacts will be, nor whether other regions such as Asia and Eastern Europe will see macroeconomic effects as their epidemics worsen:

- An empirical study of 51 countries by Bloom and Mahal which asked whether countries that had been hard hit by HIV/AIDS had experienced slower growth than others showed that between 1980 and 1992 HIV/AIDS appears to have had no statistically significant impact on per capita income growth.¹¹ Whether these findings still apply ten years on, however, has not been tested.

- *In 2000, however, the World Health Organization found that when 20% of a population has HIV, there is a 1% drop in annual GDP.¹² In 2002, UNAIDS estimated a drop of 2.6% drop in annual GDP when prevalence rates pass 20%.¹³*

- In Asia, estimates suggest that the current impact at a macroeconomic level remains minimal, although the economic impact on families is devastating.¹⁴

- *In Thailand, calculations suggest that the average annual growth rate of per capita GDP between 1990 and 2015 will be reduced by about 0.7 percentage points by an epidemic that has, to date, been Asia's most serious.¹⁵*

- For Africa, economists have suggested fairly modest effects on growth. The World Bank, for example, estimated that the ten African countries with the highest HIV prevalence rates would see declines of 0.3% (out of a total of 3.5% expected growth) in annual per capita GDP growth by 2025, due to the effect of the virus being mainly concentrated among easy-to-replace and relatively unproductive unskilled workers.¹⁶ The US National Intelligence Council believes the epidemic has already cost the continent's hardest-hit countries 1% of GDP.¹⁷
- The effects of the virus are not limited to Africa. A study of over 70 developing countries, cited by McPherson, suggests countries with prevalence rates above 5% will suffer 0.4% annual declines in GDP growth, while those with prevalence above 30% will see declines of 1.4%.¹⁸ The World Bank has recently suggested that the Middle East, which has yet to experience a serious epidemic, could lose up to 35% of GDP by 2025.¹⁹
- Country studies in Africa find slightly larger impacts. In Botswana, GDP growth has been predicted to fall from 3.9% without HIV/AIDS to

between 2% and 3.1% per year with the virus.²⁰ In South Africa, meanwhile, the World Bank has estimated that GDP will be 17% lower in 2010 because of HIV/AIDS.²¹

- AIDS and tuberculosis could also lead to a 1% decline in Russia's GDP by 2005.²² Eberstadt uses World Bank data on the relationship between life expectancy and output per member of the 15-64 year old age group to inform what he calls a "health-based productivity" approach to estimating the economic impacts of the epidemic. He finds that even a mild HIV epidemic would more than halve Russia and China's per person output growth predicted by the health-based method between 2000 and 2025. An intermediate epidemic, meanwhile, would mean the predicted level of output in Russia would be lower in 2025 than 2000, and in China barely higher. In India, a mild epidemic would reduce output growth by about two-fifths, and an intermediate outbreak would reduce growth to zero.
- Expanding this to national levels and incorporating the effect of a reduction in the 15-64 age cohort would mean a reduction in Russia's output growth to zero (from 33% in a no-AIDS scenario) with a mild epidemic and to negative 40% with an intermediate scenario. India and China would see reductions of between one-third and three-fourths, depending on how badly they are affected.²³

Some authors believe that macroeconomic models systematically understate the economic impact of the epidemic, especially in the worst affected countries. They warn that countries, or even whole regions, face impending economic collapse:

- Whiteside and McPherson have argued in separate papers that the lag between HIV infection and resulting sickness means that even countries with high HIV infection rates have yet to experience the full impact of AIDS. Models also fail to accommodate the impact on agriculture production and food security and the erosion of networks, social capital and capacity. McPherson predicts that African economies will "implode" under pressure from HIV/AIDS.²⁴
- Bell, Devarajan and Gersbach focus on the destruction of human capital, and in particular the ability to transfer knowledge across generations, to argue that the economic costs of HIV/AIDS will be higher than usually predicted.²⁵ They predict "a collapse of economic productivity" in Africa, modeling the impact of the epidemic in South Africa, where they believe universal education will be replaced by universal child labour in the worst case scenario and that even timely intervention will lead to sluggish growth and serious fiscal burdens.²⁶

It is worth underlining that international development targets, such as the Millennium Development Goals and the targets set for Africa under the NEPAD, do not

envisage a status quo in developing countries, but rapid (and, what would be for many, unprecedented) growth. In Asia, meanwhile, the progress of potential success stories such as China and India could be threatened if their epidemics deteriorate in the way envisaged by current pessimistic predictions.²⁷ Countries with deteriorating health standards are unlikely to attract increasing levels of foreign direct investment or to develop an environment that will stimulate growth in the medium or long term. Businesses will face elevated levels of uncertainty, making investment decisions more difficult to take, reducing the quality of the available workforce and having a potentially damaging effect on the customer base. In the next section, we review the literature exploring the impact of the epidemic at a micro-level, in particular from the point of view of firms.

Increased business costs

The impact of AIDS on business is a separate but related question to the epidemic's economic impact. Firms are affected by the macro-economic environment they operate in and by their expectations of how that environment will develop. However, for most businesses, the epidemic is likely to be most 'visible' if it has a direct effect on investment, the costs of production or the ability to make sales. Five main aspects of a company's business – its workforce, its customer base, its cost of capital, its reputation and the business environment in which it operates – may be vulnerable to the impact of HIV/AIDS.

Workforce issues are clear and pressing, with labour forces predicted to shrink rapidly in countries with the most serious epidemics:

- *Four countries in sub-Saharan Africa are projected to have workforces over 30% smaller in 2020 than if they had suffered no AIDS epidemic. Fourteen countries will see losses of between 10 and 30%, while 18 will see losses of less than 10%.*
- *In Asia, the figures are significantly smaller, with Cambodia predicted to lose 5.9% of its workforce by 2020 and India, 1.5%.*
- *In Latin America, Haiti will lose 8.7% by 2020 and Brazil, 1.1%. Guyana, meanwhile, will lose just over 10%.²⁸*

These figures provide little information about which groups of workers will be hardest hit, although a study in South Africa and Botswana found that unskilled and skilled workers were two to three times more likely to

be infected than supervisors or managers.²⁹ Nor is it clear what impact a smaller workforce will have on the labour market, since most developing countries experience persistent unemployment and underemployment.

Businesses experience the impact of HIV/AIDS on workers through three potential avenues: greater costs and lost productivity due to worker sickness, increased turnover of workers, combined with elevated recruitment and training costs. Most studies have concentrated on rising costs due to sickness:

- A six-firm study by Rosen and co-authors in Botswana and South Africa found that the annual "AIDS Tax" on business would impose costs over the next ten years of between 0.4% and 5.9% of the annual wage bill. All six companies, the authors suggest, would have achieved positive returns on investment had they provided free antiretroviral drugs to infected employees.³⁰ One problem with this conclusion is that businesses may well find it more profitable to discriminate against individuals with AIDS. They can dismiss them or refrain from hiring them at all, and they can often train new workers as necessary. Such discrimination, the authors note, is illegal in a growing number of countries, but whether such laws are enforced is highly doubtful.
- A 14-firm case study in Benin found that half of those employees identified as HIV positive held positions considered 'important' by the firm. Firms reported that costs were increasing and profits decreasing.³¹

- *A survey of 1,006 companies in South Africa found that 43% of firms envisaged significant adverse impacts on their business within five years as a result of HIV/AIDS. 30% of firms reported higher workforce turnover rates and 24% increased costs of recruitment and training.*³²

- A survey of the agricultural sector in Kenya found that "the commercial agricultural sector of Kenya is facing a severe social and economic crisis due to the impact of HIV and AIDS." Motivation and labour productivity were negatively affected by HIV/AIDS-related illnesses and deaths.³³
- A study of tea estate workers in Kenya between 1997 and 2002 found that HIV positive workers were significantly less productive in the 18 months preceding death than uninfected workers, took 11 days more sick leave than uninfected workers and spent 21.8 days assigned to less strenuous tasks.³⁴

- In Tanzania, one company saw its medical costs per employee rise five-fold between 1993 and 1997. It instituted a cap on expenditure as a result. The experience of the Tanzania-Zambia Railway Authority was similar, with medical costs rising by over 60% in 1995.³⁵
- In Zambia, meanwhile, *ex gratia* payments increased by nearly 350% between 1991 and 1992 as the death rate among employees increased five-fold.³⁶
- In 1996-97, a company in Kenya experienced a 40-fold increase in funeral expenses in a four-year period during the 1990s, as 41% of employees left the company through illness and death.

A smaller number of studies have studied the impact of workforce turnover:

- In 1997, a survey of nearly a thousand firms in sub-Saharan Africa found minimal impact on staff turnover, but noted that firms were taking an average of 24 weeks to replace a deceased professional.³⁷ Biggs and Shah, however, look only at attrition when they are examining the effect of AIDS on firms. This seems inadequate. "The effect on firms of the AIDS epidemic," they say, "depends upon the strength of two factors. First, work force attrition resulting from illness or death due to HIV infection must be a large proportion of the total worker attrition in firms. Second, the higher rates of worker attrition should adversely affect firms' costs and performance. Using primary survey data from five sub-Saharan African countries, covering 992 firms with total employment of 115,136 workers, this study finds both effects to be minor." They shuffle other concerns to the side: "One would expect that the most direct measurable effect of HIV/AIDS on firm performance would come from worker attrition rates due to sickness or death. Additional effects could result from lower worker productivity, as sick workers may be less productive workers. But, empirically, the worker productivity effect is difficult to isolate and to measure. Also, the AIDS epidemic may have demand-side effects resulting from declining numbers of consumers for the firm's products or from shifts in expenditures away from particular products and towards health services. But demand effects too are difficult to evaluate. Hence, no attempt will be made in the present analysis to assess productivity or demand effects." Of course, even this listing of impacts with which they do not deal does not begin to touch on the larger range of concerns addressed by McPherson.
- USAID reports that the recruitment of skilled workers is so difficult for some African companies that they are recruiting expatriates following the death of senior managers.³⁸
- Other studies, however, suggest that most of those dying are unskilled workers, who are both relatively less productive than skilled workers and easier to replace in countries with sizeable pools of surplus labour.³⁹

There have been some efforts to quantify these increased costs:

- The US National Intelligence Council reports a study conducted by several southern African countries on the impact of AIDS. The study estimated that productivity would fall by 5% and profits by 6-8% as a result of absenteeism, health and insurance payments, and recruitment and training costs.⁴⁰
- In Zimbabwe in the mid-1990s, a study found that nearly 30% of the workforce at one large firm was HIV-positive. While only 64 employees had so far died of AIDS, the epidemic was already costing the firm 20% of its profits, with costs predicted to triple by 2005.⁴¹

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- *The South African mining firm Anglo Gold estimated that HIV prevalence among its workers in 2002 was 30%. By 2002, this had cost the firm between 1.1 and 5.8% of payroll depending on the actuarial model used. By 2009, it will cost between 8 and 17%.⁴²*
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- There is also limited evidence that foreign investors are being deterred by HIV/AIDS. According to a British House of Commons committee study, some business investment is moving out of Africa as firms are deterred by perceived costs to business. The Joshua Doore Group, for example, a South African retailer, has begun to diversify away from Africa towards Eastern Europe, where customer bases are less affected by the virus. Other contributors to the Committee's report, however, had found minimal impacts on investment and the report concludes that such effects are, so far, limited and not generalized.⁴³

Other effects on business

While firms have reasonably clear opportunities to gain information about the impact of AIDS on workforce costs, it is much harder for them to understand any changes in their customer base. AIDS is altering the demographic profile of the worst affected countries, with young adults – a major source of demand for goods and services – worst hit by the epidemic. One would expect some industries to see increased demand, for example health care providers and funeral services, even as other markets shrink, but there have been few studies of the likely size of these movements. Some have tried to estimate reductions in aggregate spending power resulting from the epidemic. In Côte d'Ivoire, for example, AIDS appeared to reduce a family's per capita consumption by half.⁴⁴ This kind of impact, however, is dissipated throughout the economy and is only likely to be detected directly by

firms with dominant market positions. The Joshua Doore Group forecast HIV prevalence among its customers would increase from 15% in 2000 to 27% in 2015. Remaining customers, moreover, would be less creditworthy.⁴⁵ There is potential for business associations to look more broadly at likely patterns of customer demand across a sector or the whole economy. There are currently few studies of this kind, however.

There are fewer still exploring whether initiatives a business takes on tackling HIV/AIDS as an issue can have a positive impact on its reputation. Large rich-country firms have launched major initiatives to raise awareness of the virus and prevent its spread, but they have understandably kept any findings as to the effect of these programmes on their reputation private.⁴⁶ Any impact, therefore, can best be judged by observing whether firms have continued with these programmes over the longer term or whether others follow their example.

For some companies, reputation may be a further important factor in determining whether they respond to HIV/AIDS. Pharmaceutical companies, for example, have come under considerable pressure from activists and politicians as a result of their delayed response to calls to cut anti-retroviral drug prices. Many research-based pharmaceutical companies have now established donation programmes for developing countries, bolstering their reputations and fending off criticism through socially responsible actions.

For most companies in countries with severe epidemics, reputation is likely to be less important than workforce or customer base considerations. However, the popularity of the Global Business Coalition on HIV/AIDS, which counts international firms such as The Body Shop, HP, Calvin Klein and AOL Time Warner among its members, suggests that many companies that are not on the frontline have recognized the potential of work on AIDS to enhance their reputation and strengthen worker and customer loyalty (as well, of course, as the potential of such fora to give firms the opportunity to share knowledge and experiences).

So how bad is it?

After many years of research into the impact of HIV/AIDS on economies and businesses, there is little consensus as to whether countries will experience a small, but significant, drag on economic growth – or whether the worst affected countries face total economic collapse. Equally, the costs borne by businesses are poorly understood and quantified. Case studies suggest the problems are serious, at least for some businesses, but they are limited by the difficulty in assessing the counterfactual case (how successful would the business be if HIV prevalence rates were zero?) or in summing impact across the business community (where, as in any competitive system, there will inevitably be winners and losers, whatever the total effect).

A careful survey of the available evidence, however, suggests the following conclusions can reasonably be made:

- Moderate HIV/AIDS epidemics (where prevalence rates remain below 1%) are unlikely to have macro-economic impacts that can be easily detected, but serious epidemics will limit growth in the best case and may cause more serious damage. As well as many direct effects, they increase instability and uncertainty, which degrades the environment in which businesses operate.
- Individual businesses may be damaged by HIV/AIDS (or, in selected cases, seize economic advantage from the epidemic) whether or not impact is seen at a macro-economic level. Some businesses, at least, will need a greater understanding of the epidemic, if they are to plan effectively.
- HIV/AIDS has a particularly direct impact on the labour force. One would expect businesses to be most aware of the threat HIV/AIDS poses to their workers and to plan responses in this area – we will be able to test whether this hypothesis is borne out by the GCR survey.
- The impact of the epidemic on markets and costs of capital is hard to detect. One might therefore expect lower awareness in this area and less developed business responses.
- The impact of HIV/AIDS on reputation is not a major issue for most businesses, as workforce and customer base effects are of more immediate and pressing concern, but it is of great importance to a small number. Reputation may be a key driver for large multinational businesses with high profile brands or companies in particular sectors.

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- *The intangible or hidden nature of some of the costs imposed by HIV/AIDS may lead to them being disregarded by many individual businesses. However, this may increase the demand for cross-business action, conducted through business associations and other proxies, particularly where firms would otherwise attempt to “shift the burden” of HIV/AIDS costs onto families and governments by refraining from employing HIV-positive workers or laying off those who have become infected.⁴⁷*
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Part 2: Global Business Opinion

GCR – an established business survey

The Global Competitiveness Report (GCR) was first published in 1979. It is described as “the world’s leading cross-country comparison of data and information relating to economic competitiveness and growth... the most authoritative and comprehensive assessment of the comparative strengths and weaknesses of national economies around the world.” According to the 2002-2003 report, the GCR can help guide national policy, acting as “an invaluable tool [for] identifying existing impediments to economic growth and thus helping in the design of policy measures to remove such obstacles as a precondition for advancing human well-being across the globe.”⁴⁸

The GCR uses two competitiveness indexes to track medium-term economic trends. The Growth Competitiveness Index (GCI) and the Microeconomic Competitiveness Index (MCI). The GCI is a macroeconomic index, intended to “measure the capacity of the national economy to achieve sustained economic growth over the medium term, controlling for the current level of development.”⁴⁹ The index does not pretend to be an exact measurement, but is supposed to provide a ‘rough guide’ to a country’s growth prospects. The MCI, meanwhile, “examines the microeconomic bases of a nation’s prosperity measured by its level of GDP per capita.”⁵⁰ It explores the microeconomic foundations of productivity.

Both indexes use country level quantitative data, supplemented by an Executive Opinion Survey. In 2002, for example, 4,735 business leaders in 80 countries answered 100 questions about their country, from which country-level means were calculated. Efforts are made to make the survey representative of the importance of a country’s various economic sectors. A diversity of firm sizes is also included, but the report authors state that, “The goal is not to form specific inferences about the population of firms in a country; but rather to construct a sample of firms that is adequately broad and representative to estimate non-firm information about an economy.”

Using the GCR to look at ‘new’ business issues

In recent years, the World Economic Forum has focused more heavily on social and environmental issues within the broader competitiveness framework. In the 2001-2002 report, for example, an index

measuring the environmental regulatory regime (ERRI) was introduced. The 2002-2003 report explored the broader concept of sustainability, at both macroeconomic and firm-level. Reinhardt defines a sustainable strategy as one that involves no net decrease in total assets, arguing that firm-level sustainability can be measured according to both private and social costs. The 2002-2003 report also focuses on governance, with Kaufman arguing that governance should be rigorously quantified and that this can be achieved using data from a specially-designed governance module included in the Executive Opinion Survey, complemented by other aggregate governance indicators.

The growing breadth of the GCR’s focus is rooted in the belief that global economic prospects are, in part, reliant on social development and standards of sustainability. In 2002, World Economic Forum President Klaus Schwab argued that “as the global economy experiences this period of economic and political uncertainty much is at stake. Calls for protectionism have become louder. Commitment to international efforts urgently required to fight killer diseases as well as global climate change could be undermined. And, more generally, the recent backlash against globalization could gain increased momentum. There is little doubt that these measures would hurt developing countries most.” Cornelius and co-authors, meanwhile, called for six approaches to bolstering the framework of globalization; the sixth of which called on rich countries, and especially the United States, to expand their efforts to assist poor countries. In particular, “The United States needs to provide more leadership and financing to provide debt relief and financial help for the world’s poorest countries so that they can battle the disease epidemics of AIDS, malaria, and tuberculosis that are currently killing millions of poor people each year.”

It is within this context that the 2003-2004 Executive Opinion Survey tackles the issue of HIV/AIDS on a global scale for the first time.

Using the GCR to ask about AIDS

As well as the GCR, the World Economic Forum issues a number of regional competitiveness reports. In 2000-2001, *The Africa Competitiveness Report (ACR)* was the first Forum publication to consider the impact of the HIV/AIDS epidemic. From 30 countries, 1,800 survey responses were collected, with business

leaders asked to estimate the impact of the epidemic on their workforce; the extent to which the epidemic is increasing business costs; whether the epidemic had forced their firm to hire extra workers; and the nature of any response their firm had made to the epidemic (i.e. HIV screening, free condom provision, HIV counseling or education).

Analysing the 2001-2002 ACR data, Bloom and coauthors found that:

- Business leaders generally estimated a lower HIV prevalence among their workforce than the UNAIDS estimates of actual infection rates in their country, although it was unclear whether they were underestimating the scale of the problem or because of the number of infected adults who are not working.
- There was no correlation between the severity of the epidemic and the ACR competitiveness index.
- Half of those surveyed reported that the disease has increased business costs, with 9% describing these costs as 'significant' and 15.4% believing they would be significant in two years' time.
- 14% of businesses surveyed provided routine HIV testing. Free condoms were provided by just over a quarter of all firms. 27% provided HIV counseling.

The 2003/2004 GCR aims to build on and supplement this initial research, but expands the analysis to a global level. The survey, entitled "Global Competitiveness Report 2003 – 2004 of the World Economic Forum", was conducted in 103 countries, with a total of 7,789 firms responding to the survey, during the first few months of 2003.

The full survey is 30 pages long and the instructions indicated that it would take 30 to 40 minutes to complete.

An important limitation of the Executive Opinion Survey and resulting dataset is that due to the nature of how the surveys are distributed and collected through GCR partner institutes, robust response rate figures and estimates are not available. Once invited to participate by a partner institute, firms were invited to fill out the questionnaire via the Internet or mail. The survey does not target firms' headquarters, but instead the lead person for the surveyed business in a given country.

The survey covers 12 substantive areas of interest, of which the 7th deals with human resources. Within the section on human resources there are eight questions that specifically address the issue of HIV/AIDS, with some questions divided into sub-parts. These cover:

- The current and future impact of malaria, tuberculosis and HIV/AIDS on a respondent's company.
- The current and future impact of HIV/AIDS on the communities in which the respondent's company operates.
- The sufficiency of policies put in place by the respondent's company to manage the current and future impact of HIV/AIDS on the company and relevant communities.
- Whether the respondent believes the current and future impact of HIV/AIDS at a national level has affected access to foreign direct investment (FDI) in the last five years.
- The percentage of employees the respondent estimates to be HIV positive in his or her company, and whether this estimate is based on a quantitative study that includes company specific information.
- Whether the respondent's company has an HIV/AIDS-specific written policy, whether this policy has been signed and approved by the board and by labour unions, and whether a committee meets regularly to ensure policy implementation, monitoring and review.
- How seriously the HIV/AIDS epidemic is currently affecting the following aspects of the respondent's business: death, disability, and funeral expenses; medical expenses; productivity and absenteeism; recruitment and training expenses; revenues, due to economic impact of HIV/AIDS on the local market.
- Whether the HIV/AIDS policy and programme at the respondent's company addresses 19 issues, grouped under the following headings: prevention programme elements; target of prevention activities; discrimination and disclosure policy; care, support and treatment; coverage of care, support and treatment.

The responses to these questions allow for a detailed description of business opinion on HIV/AIDS at national and regional level. Responses to questions on HIV/AIDS can also be correlated with other data collected in the survey, on governance for example. Finally, opinion data collected through the survey can be compared with more objective data, such as UNAIDS country-level estimates of infection rates.

As with all opinion surveys, the data need to be interpreted with caution. The collection of data through surveys has been a growth industry in recent decades and has come to influence political and business decision-making at the highest levels. However, as highlighted in a comprehensive study by Schuman and Presser,⁵¹ there are some concerns, particularly with cross-country surveys such as the GCR poll, that the way questions are asked in particular contexts may influence results. Nevertheless, as Bloom observes, well-designed surveys conducted by the same

organization are a valid predictor of behaviour, particularly when tracked over time.⁵² When the subject being studied (in this case, HIV/AIDS) is just one among many issues tackled by a survey, as is the case with the Executive Opinion Survey, moreover, responses are less likely to suffer from demand effects (where knowledge that a survey is specifically about HIV/AIDS, for example, biases responses in some way towards that topic). In future GCR surveys, therefore, the opportunity to observe changes in how businesses respond to HIV/AIDS will be particularly valuable.

Nature of survey responses

We have classified the 7,789 respondents into regions, using the United Nations Population Division classifications, but with some exceptions. Countries from northern Africa and western Asia sub-regions are combined into a Middle East/North Africa region. We have divided the Latin America and Caribbean region into a Central America and Caribbean region and a South America region. Table 1 shows the distribution of responses across these regions and their constituent countries, along with 2001 total population estimates for each country. As this table shows, Africa is over-represented in the survey relative to its share of population (20.8% of firms surveyed, versus an 8.9% share of population in African countries surveyed). Europe is also over-represented, while Asia is underrepresented. Because the global sample is not regionally representative, most of the analyses reported control for region, either by looking within region, comparing different regions, or including a set of region dummy variables in a regression specification.

Table 2 groups countries according to their income group, using standard World Bank classification:

- Low income (2001 gross national income per capita (PCI) less than or equal to US\$ 745)
- Lower middle income (2001 PCI from US\$ 746 and US\$ 2,975)
- Upper middle income (2001 PCI from US\$ 2,976 to US\$ 9,205)
- High income (2001 PCI greater than or equal to US\$ 9,206).

The share of firms located in low-income countries (among all respondent firms in the survey) is lower than the share of population among low-income countries included in the survey. Lower middle-income countries are also slightly under-represented. Upper middle-income countries are over-represented, with high-income countries also modestly over-represented. Thus, the global sample is not closely representative of income groups, although it is more representative than by geographic region. As a result, many of the analyses reported below will control for income group or per capita income (or look at particular countries).

Table 3 groups countries according to their HIV prevalence rate as estimated by UNAIDS. The share of firms from countries with prevalence rates of less than 1% is lower than the share of population among low-prevalence countries included in the survey. Firms from countries with prevalence of between 1 and 4%, meanwhile, are over-represented, with firms from countries with 5-9% prevalence also slightly over-represented. The remainder are closely matched with the share of population of their prevalence bracket.

In terms of size of firms in the 2003/2004 Executive Opinion Survey, 25% of firms surveyed had fewer than 50 employees; 13% 51-100 employees; 29% 101-500 employees; 11% 1,001-5,000 employees; 15% 5,001-20,000 employees; and 2% more than 20,000 employees.

As Table 4 shows, survey questions on AIDS were not answered by all respondents, with the number of non-respondents varying considerably from question to question. 98% of respondents provided an opinion on the seriousness of the impact of the epidemic on their company and only slightly fewer provided an opinion on the impact of the epidemic on the community in which their businesses operate. Roughly 90% of respondents answered questions on the sufficiency and components of their HIV/AIDS policies, and the impact of HIV/AIDS on FDI. However, many fewer were able to provide an estimate of the proportion of the employees who are HIV positive, with 36% of responses either missing or "don't know."

Missing data can lead to biased and misleading inferences when they are not random, so we have conducted some multiple regression analyses to assess the missing data patterns. The results reveal that per capita income is the most common and statistically significant determinant/correlate of missing data. In general, data are more likely to be recorded as missing on surveys of firms in low-income countries. There are also some regional differences in the propensity for data to be reported as missing, but only for some HIV-related variables. For a few HIV-related variables, the UNAIDS estimate of HIV prevalence is a correlate of missing data.

In general, however, we believe that missing data do not greatly undermine the validity of the survey, although they do underline the importance of raising questions about the nature, accuracy and strength of the *opinions* expressed by respondents. How much do business leaders know about the impact of AIDS? To what extent are their answers based on evidence or conjecture? And how important are their opinions likely to be – whether based on fact or not – to the future course of the epidemic? We return to the questions in later sections.

A full account of how the data are reported, including how we have broken down the answers to scaled questions, is provided in the appendix.

How big is the problem?

Respondents were asked what percentage of their employees they estimate are HIV positive (question 7.21). This question provides the best way of gauging the perceived scale of the epidemic at firm level. However, as we will discuss, when infection rates reported in the survey diverge from UNAIDS figures at a national level, it is difficult to establish the extent to which respondents are over- or under-reporting infection rates, as opposed to the extent to which infection rates in their company are higher or lower than found in the population as a whole.

As with other questions in this section, we report the data first at an overall level, then broken down by national income group, then by national HIV prevalence levels and finally by region. We also note cases where individual countries diverge from the norm as well as the highest and lowest country responses to each question.

Responses to question 7.21 show that most business leaders believe that relatively few of their current employees are infected with HIV (see Table 5 for additional detail):

Firm estimated HIV prevalence	Percent of Firms
Less than 1%	54%
1 – 4%	5%
5 – 9%	2%
10 – 14%	1%
15 – 19%	1%
20% or more	1%
Did not know or no response	36%

Firms in low-income countries estimate higher prevalence rates among their workers than firms in wealthier countries:

- In businesses operating in low-income group countries, 31% of respondents estimate infection rates are less than 1% among their workforce (ranging from 67% in Bangladesh to 0% in Zimbabwe and 8% in Zambia). 9% estimate a rate of between 1 and 4%, 5% a rate of between 5 and 9%, 4% a rate of between 10 and 14%, 2% a rate of between 15 and 19% and 2% a rate of 20% and over. 48% either do not know how many are infected or do not respond to the question.
- In businesses operating in lower middle-income group countries, 50% of respondents estimate infection rates are less than 1% among their workforce (ranging from 72% in Jordan and the Philippines to 15% in Namibia). 3% estimate a rate of between 1 and 4%, 1% a rate of between 5 and 9%, 1% a rate of between 10 and 14% and 1% a rate of 20% or higher. 45% either do not know how many are infected or do not respond to the question.

- In businesses operating in upper middle-income group countries, 64% of respondents estimate infection rates are less than 1% among their workforce (83% in Korea to 11% in South Africa). 4% estimate a rate of between 1 and 4%, 2% a rate of between 5 and 9%, 1% a rate of between 10 and 14%, 1% a rate of between 15 and 19% and 2% a rate of 20% or higher. 27% either do not know how many are infected or do not respond to the question.
- In businesses operating in high-income group countries, 77% of respondents estimate infection rates are less than 1% among their workforce. 4% estimate a rate of between 1 and 4%. 19% either do not know how many are infected or do not respond to the question.

Categorizing countries by HIV prevalence rates (as estimated by UNAIDS) shows that most firms believe infection rates among their workers are lower than national prevalence rates. Firms from countries with 15-19% national prevalence rates estimate particularly low workforce infection levels:

- 3% of respondents in countries with national prevalence of less than 1% estimated infection rates at firm level at 1% or over. 63% estimated infection among their workforce on a par with national rates. 33% either do not know how many are infected or do not respond to the question.
- 2% of respondents in countries with national prevalence of between 1 and 4% estimated infection rates at firm level at 5% or over. 5% estimated infection among their workforce on a par with national rates, and 39% at below 1%. 54% either do not know how many are infected or do not respond to the question.
- 5% of respondents in countries with national prevalence of between 5 and 9% estimated infection rates at firm level at 10% or over. 8% estimated infection among their workforce on a par with national rates, and 42% at below 5%. 27% estimated infection rates at firm level to be below 1%. 45% either do not know how many are infected or do not respond to the question.
- 8% of respondents in countries with national prevalence of between 10 and 14% estimated infection rates at firm level at 15% or over. 15% estimated infection among their workforce on a par with national rates, and 36% at below 10%. 16% estimated infection rates at firm level to be below 1%. 40% either do not know how many are infected or do not respond to the question.
- 3% of respondents in countries with national prevalence of between 15 and 19% estimated infection rates at firm level at 20% or over. 2% estimated infection among their workforce on a par with national rates, and 57% at below 15%. 15% estimated infection rates at firm level to be below 1%. 39% either do not know how many are infected or do not respond to the question.

- 18% of respondents in countries with national prevalence of 20% or above estimated infection rates at firm level at 20% or above. 11% estimated infection among their workforce at below 1%. 19% either do not know how many are infected or do not respond to the question.

At a regional level, of those who estimated infection rates, firms in Africa report by far the highest rates. Some firms in Central America and the Caribbean also report fairly high workforce prevalence:

- 52% of respondents operating in Middle East/North Africa estimated that less than 1% of their workforce is infected with HIV. The remaining 42% either do not know how many are infected or do not respond to the question.
- 92% of respondents operating in Oceania estimated that less than 1% of their workforce is infected with HIV. The remaining 1% estimated rates of between 1 and 4%. 7% either do not know how many are infected or do not respond to the question.
- 65% of respondents operating in Europe estimated that less than 1% of their workforce is infected with HIV. The remaining 2% estimated rates of between 1 and 4%. 32% either do not know how many are infected or do not respond to the question.
- 63% of respondents operating in Asia estimated that less than 1% of their workforce is infected with HIV. 2% estimated rates of between 1 and 4%, 1% rates of between 5 and 9% and 1% rates of between 10 and 14%. 33% either do not know how many are infected or do not respond to the question.
- 61% of respondents operating in South America estimated that less than 1% of their workforce is infected with HIV. 4% estimated rates of between 1 and 4%, 1% rates of between 5 and 9% and 1% rates of 20% and over. 33% either do not know how many are infected or do not respond to the question.
- 76% of respondents operating in North America estimated that less than 1% of their workforce is infected with HIV. 6% estimated rates of between 1 and 4%, 1% rates of between 5 and 9% and 1% rates of between 10 and 14%. 16% either do not know how many are infected or do not respond to the question.
- 47% of respondents operating in Central America/Caribbean estimated that less than 1% of their workforce is infected with HIV (but only 43% of Haitian firms estimate such low levels). 9% estimated rates of between 1 and 4%, 1 rates between 5 and 9%, 1% rates between 10 and 14% and 1% rates of 20% and over. 42% either do not know how many are infected or do not respond to the question.
- 25% of respondents operating in Africa estimated that less than 1% of their workforce is infected with HIV. 11% estimated rates of between 1 and 4%, 7% rates of between 5 and 9%, 5% rates of

between 10 and 14%, 3% rates of between 15 and 19% and 4% rates of 20% and over. 45% either do not know how many are infected or do not respond to the question.

The vast majority of these responses, however, are based on guesswork, whether informed or otherwise. Among firms that provided a prevalence estimate, only 13% claim to have based it on a quantitative study including company specific information.

21% do not answer this question (see Table 6). Furthermore, we do not have information on the accuracy or recency of those studies that have been conducted.

There is little variation in the proportion of firms that have conducted quantitative studies when they are broken down by income group:

- In low-income group countries, 16% claim to have based their estimate on a survey. 28% do not answer the question.
- In lower middle-income countries, 14% of firms claim to base their estimates on a survey. 25% do not answer the question.
- In upper middle-income countries, 15% claim to base their estimates on a survey. 15% do not answer the question.
- In high-income countries, 8% claim to base their estimates on a study, with 12% not answering the question.

There is similarly little variation when responses are broken down by national HIV prevalence levels:

- 13% of respondents in countries with national prevalence of less than 1% claim to base their firm-level estimates on a study. 18% do not answer the question.
- 14% of respondents in countries with national prevalence of between 1 and 4% claim to base their estimates on a study. 30% do not answer the question.
- 17% of respondents in countries with national prevalence of between 5 and 9% claim to base their estimates on a study. 29% do not answer the question.
- 14% of respondents in countries with national prevalence of between 10 and 14% claim to base their estimates on a study. 33% do not answer the question.
- 19% of respondents in countries with national prevalence of between 15 and 19% claim to base their estimates on a study. 31% do not answer the question.

- 20% of respondents in countries with national prevalence of 20% or above claim to base their estimates on a study. 11% do not answer the question.

When looked at by region, there are greater disparities, with the reported proportion highest in Asia, followed by Africa:

- In Middle East/North Africa, 13% of firms report having conducted quantitative studies (with Jordan (22%) and Morocco (17%) the highest). 35% do not answer the question.
- In Oceania, 3% of firms report having conducted quantitative studies. 6% do not answer the question.
- In Europe, 11% of firms report having conducted quantitative studies (Romania (23%), Iceland (19%) the highest). 16% do not answer the question.
- In Asia, 20% of firms report having conducted quantitative studies (with Indonesia (47%), Korea (28%), Thailand (27%), Pakistan and China (both 24%) the highest). 15% do not answer the question.
- In South America, 14% of firms report having conducted quantitative studies (Brazil and Colombia (both 24%) the highest). 18% do not answer the question.
- In North America, 6% of firms report having conducted quantitative studies. 12% do not answer the question.
- In Central America/Caribbean, 12% of firms report having conducted quantitative studies (Panama and Mexico (both 19%) the highest). 28% do not answer the question.
- In Africa, 16% of firms report having conducted quantitative studies (South Africa (35%), Zimbabwe (30%) and Kenya (25%) the highest). 28% do not answer the question.

Table 7 provides data from this question for those respondents (78% of those surveyed) who provide any other answer than “don’t know” and whose companies are based in economies where UNAIDS provides estimates for HIV prevalence in 2001 (this excludes responses from Taiwan, Tunisia and Paraguay where UN data are not available). The table also splits out data from those companies that claim to have used a quantitative study to back up their estimates (panel 2) and those that do not (panel 3).

Overall, companies consistently report lower infection rates among employees than would have been expected if they employed a random cross section of the adult population.

- 84.5% of firms providing prevalence estimates report infection rates of under 1%; only 77% of these firms would fall into this category if their infection rate matched the UNAIDS estimate.
- 1.6% report infection rates of above 20%, while UNAIDS figures would suggest 4.3% of these firms are in countries with such rates.

Interestingly, firms are more likely to report infection rates that are lower than UNAIDS estimates when they have conducted a quantitative study than when they have not.

- 83.8% of firms with a quantitative study report infection rates below 1%, compared to 69.5% predicted from the UNAIDS data. 1.8% report infection rates above 20%, compared to 5.6% predicted from UNAIDS data.
- Among firms who have not conducted a quantitative study, the difference is considerably smaller both at high (84.6% compared to 79.0%) and low (1.5% and 4.1%) infection rates.

Two conclusions are possible, assuming the accuracy of the UNAIDS data:

- All firms are systematically underestimating infection rates, including those who have conducted quantitative studies (i.e. their studies are defective in one way or another).
- Firms that have conducted workplace prevalence studies have lower infection rates among their employees than in the general population, because people with HIV/AIDS are less likely to be employed for various reasons.

If the latter conclusion holds and firms which have conducted studies are reporting accurate prevalence levels, then:

- Either firms without studies are over-reporting infection rates (because, for example, they rely on what they have heard about UNAIDS estimates); or
- Firms with studies have lower infection rates than firms without studies (because they naturally or deliberately employ fewer workers with HIV/AIDS, or have successful prevention programmes in place).

Also noteworthy, as Table 8 shows, is the fact that the disparity between the UNAIDS data and the GCR data is greatest among African firms. For example, 45.2% of the respondent firms in Africa (with non-missing data) report HIV prevalence of less than 1%. By comparison, just 10.2% of the respondent firms in Africa are located in countries with adult prevalence of less than 1% according to UNAIDS data. 6.7% of the respondent firms in Africa (with non-missing data) report HIV prevalence of 20+%, compared to a prediction of

23.4% from UNAIDS data. The disparity between UNAIDS data and GCR data is also high among firms in Central America and the Caribbean (80.3% firms reporting less than 1% prevalence, versus 45.5% from the UNAIDS prediction; 14.7% reporting 1-4% prevalence, compared to 51% from the UNAIDS prediction).

These findings allow two main conclusions. First, and on the whole, business leaders have only approximate knowledge of prevalence rates among their workers, though a proportion have invested in surveys. Their response to the epidemic is necessarily based on a paucity of evidence. Second, outside commentators do not have access to better information. The working population *may* have lower prevalence rates than the adult population, but this undoubtedly varies from country to country. Given that workforce impacts are the easiest for businesses to detect and monitor (as argued above), respondents' opinions of the scale of the impact on their businesses need to be treated with some caution. Their view is a partial one – but no less interesting for that.

Does HIV pose a threat to business?

Respondents are asked a question (question 7.17a-c) that encourages them to reflect not just on the current and future impact of HIV/AIDS on their business, but also the current and future impact of malaria and tuberculosis. Respondents are asked to rate their responses on a scale of 1 (extremely serious) to 7 (not a problem).

Here and throughout this report, we use three yardsticks. We define “serious impact” as a response of 1-2; “some impact” as a response of 3-5; and “little impact” as a response of 6-7:

How serious do you consider the current and future impact of these diseases on your company?

	Expect serious impact	Expect some impact	Additional information
HIV/AIDS	21%	47%	Table 9
Malaria	14%	31%	Table 10
Tuberculosis	13%	36%	Table 11

Again, low-income countries are the most concerned about all three diseases. 53% of respondents operating in low income group countries select answers that suggest that HIV/AIDS has had or will have a serious impact on their business, compared to 44% for malaria and 35% for TB. The gap between the impact of HIV/AIDS and the other infectious diseases narrows among those selecting answers that suggest some (as opposed to serious) impact on their firms,

with 82% claiming some impact from HIV/AIDS, compared with 78% from malaria and 77% from tuberculosis.

These results are considerably higher than for any of the other income groups. Among those in the high-income group, just 3% say that HIV/AIDS has had or will have a serious impact on their business, and 1% each for malaria and TB. However, 25% claim some degree of current or future impact from HIV/AIDS compared with 5% for malaria and 8% for TB.

Firms in countries with high national prevalence rates are the most concerned about HIV/AIDS, malaria and TB. Serious impact as a result of HIV/AIDS is reported by 79% of respondents operating in countries where national prevalence is at 20% or higher, falling to 10% among firms where infection rates are at less than 1%. By contrast, serious impact as a result of malaria is reported by 33% and 5%, and as a result of TB by 35% and 1%.

In all countries where national HIV infection rates are above 1%, at least 72% of respondents give answers that suggest they anticipate or are experiencing some impact on their business as a result of HIV/AIDS. This figure rises to 94% in countries where national prevalence is between 15 and 19% and 98% where rates are 20% or above.

Respondents that anticipate some impact as a result of tuberculosis range from 53% among those operating in countries with national HIV prevalence of between 1 and 4%, to 87% among those where 20% or more of the national population is infected. Except among those in areas where infection rates are between 10 and 14%, where more firms expect some impact from malaria (93%) than HIV/AIDS (87%), respondents also gave answers that suggest they consider the former to be the lesser threat to their business.

In countries where infection rates are less than 1%, 63% of respondents do not expect HIV/AIDS to impact on their business at all. 81% of these firms also anticipate that malaria will have no impact, and 74% that TB will not affect them.

At a regional level, too, HIV/AIDS is seen as a worse problem than either malaria or TB for firms in every region and overall:

- In Africa, 60% of respondents select answers that suggest HIV/AIDS has had or will have a serious impact on their business (with Zimbabwe (90%), Chad (86%) and Zambia (80%) the most concerned), compared to 50% for malaria and 39% for TB.
- Concern is next highest in Central America/Caribbean (22% for AIDS (with Haiti (60%), Jamaica (53%) and Trinidad & Tobago (48%) most concerned), 7% for malaria, 8% for TB); followed by Asia (17% for AIDS, 8% for

malaria, 10% for TB – Vietnamese firms (74%) are the most concerned in Asia); and Middle East/North Africa (15% for AIDS, 10% for malaria, 11% for TB).

- Concern is somewhat higher in North America (9% for AIDS, 1% for both malaria and TB) than in South America (7, 4 and 6% respectively). Europe follows (6, 2 and 5%), with no respondents believing there is a serious impact from any of the diseases in Oceania.

Looking at all three diseases together, as Table 12 shows, 25.3% of all firms surveyed claimed that at least one of the infectious diseases threatens to have current or future serious impacts on their company (answering 1 or 2 for at least one of the three diseases). The proportion varies greatly across regions, with 71.9% of African firms expressing this sentiment, and only 8% of European firms. 24.2% of Central American and Caribbean firms are concerned that one or the other of the infectious diseases pose a risk, higher than the percentage of Asian firms (20.7%). These results are influenced by concern over HIV/AIDS in Haiti, where 60% of firms rate the current and/or future impact of HIV/AIDS on their firms as very serious, and Jamaica (53%), and concern over all three diseases in Trinidad and Tobago (50% of firms are very concerned about one or the other of the diseases).

Imposing a stricter definition of seriousness (respondents who answer 1 or 2 to all three diseases), only 8.6% of all surveyed firms are concerned about all three infectious diseases, with Africa leading at 29.1%, followed by the Middle East and North Africa at 8.2%. The latter figure is explained in large part by concerns over HIV/AIDS, TB and malaria in Morocco, where 20-30% of firms expressed serious concern over these 3 infectious diseases.

In contrast, 46% of all firms are unconcerned by the listed infectious diseases (that is, they answered 6 or 7 to all three diseases), with 5% of African firms and 43% of Asian firms unconcerned. The latter finding is affected by the inclusion of countries like Singapore (75% of firms unconcerned about all 3 diseases), Japan (61%), Hong Kong (6%), and Korea (65%). By contrast, the region also includes countries such as Vietnam (with only 4%), and Bangladesh (0% unconcerned).

Table 13 shows that concerns about the three diseases tend to overlap. Firms that are concerned about TB are much more likely to be concerned about HIV than are firms that are unconcerned about TB. This result holds very strongly overall, within each income group and across regions. Firms worried about malaria report similar concerns over HIV/AIDS - the connection between TB and HIV is stronger in some regions and that between malaria and HIV is stronger in others. This, of course, does not realistically reflect the link between HIV and TB, whereby rising rates of AIDS dramatically increase the burden of TB.

As regression analysis of question 7.17c explores factors that make a respondent more likely to believe HIV/AIDS is a serious problem for their company. We test the effect of five sets of variables: the average regional severity of the epidemic; the national severity of the epidemic; the firm's own estimate of HIV prevalence among its workforce; per capita income in the country in which the firm operates; the size of firm (more than 100 employees versus 100 employees or fewer). We also experimented with the inclusion of variables reflecting foreign and government ownership of shares of the firm, but found these were generally not statistically significant in the analyses reported below. The estimates can be interpreted as answers to the following two thought experiments:

- If one compared two firms that were identical with respect to their firm size category, the per capita income of the country in which they operated, and the region in which they operated, would a more severe HIV epidemic at the national or firm levels be associated with a perception of more severe adverse impact?
- If one compared two firms that were subject to identical HIV shocks at the national and firm levels, is there a tendency for their perception of the severity of the epidemic's adverse impact on the firm to vary with firm size (better or worse for large firms), the per capita income of the country in which they operate (better or worse for firms in high-income countries), and the region in which they operated (better or worse in different regional settings).

The results are based on 4,635 firms for which data on the different variables included in the regression analysis were available, and yield the following findings:

- Respondents perceive a more adverse impact on their firm when they are in countries with more severe epidemics and when they estimate higher rates of HIV prevalence among their workforces. This result applies to firms that are comparable in terms of country income, region of location and firm size. These are entirely plausible results and are consistent with the view that executives' expectations of their firms' economic performance are systematically related to the HIV threats they perceive for their workforces and their customer bases.
- Respondents perceive a more adverse impact on their firm when they are located in North America, Africa and Asia, and when the country they do business in has low income. A more modest and less robust finding is that they perceive a more adverse impact when their firms are relatively large in size (e.g., 101+ employees as compared with 100 or fewer employees). This result applies to firms that are comparable in terms of the HIV threats they perceive to their workforce and customer bases (as proxied by their estimate of workforce HIV and UNAIDS national estimate of adult HIV).

Taken as a whole, the responses to question 7.17 allow us to reach a number of conclusions – many of which are, of course, not surprising. The HIV/AIDS epidemic is regarded as a serious problem by business leaders, but mostly in countries and regions where prevalence rates are high. Business leaders in low-income countries are more likely to see the disease as a threat than those in richer countries. HIV/AIDS is consistently seen as a more serious threat to business than either TB or malaria, at a global level and across regions. These data do not provide us with detail on the nature of the business threat respondents perceive, however. We therefore turn to this issue in the next section.

How are businesses affected today?

Respondents were asked what impact the HIV/AIDS epidemic is *currently* having on the following aspects of their business: death, disability and funeral expenses; medical expenses; productivity and absenteeism; recruitment and training expenses; and revenues due to economic impact of HIV/AIDS on the local market. Respondents were asked to score answers on a scale of 1 (significant negative impact) to 7 (not relevant at all).

- In all categories, a substantial majority indicated that HIV/AIDS was not currently having a significant impact on operating costs.
- A smaller proportion in each category indicated serious negative impact on operating costs.

How severely is HIV/AIDS affecting the following areas of your business?	Minimal impact	Serious impact	Additional information
Death and disability	74%	6%	Table 14
Medical expenses	72%	6%	Table 15
Productivity and absenteeism	70%	7%	Table 16
Recruitment and training	71%	5%	Table 17
Lost revenues	71%	4%	Table 18

- In an earlier question (see Table 19), respondents were asked whether the current and future impact of HIV/AIDS has affected national access to foreign direct investment (FDI) over the past five years. Again 10% of respondents did not provide an answer. 66% thought the epidemic had not had a significant impact on FDI, with just 3% believing there had been a serious impact.

In countries in the low-income group, fewer respondents than average reported no significant impact on their business in each of the five categories:

53% for death, disability and funeral expenses; 51% for medical expenses; 51% for recruitment and training expenses; 50% for impact on revenue; 49% for productivity and absenteeism. This group was also more likely to indicate serious negative impact on operating costs: 16% for productivity and absenteeism; 15% for medical expenses; 14% for death, disability and funeral expenses; 10% for recruitment and training expenses; 10% for impact on revenue. Concern about the impact of HIV/AIDS on foreign direct investment was also higher. 43% of respondents thought there had been minimal impact and 6% serious impact on their country.

Similarly, responses from firms in countries where national HIV prevalence is high suggested more serious impact on operating costs across all categories. In countries with infection rates of 10% and above, an average of 31% of respondents reported minimal impact on recruitment and training expenses; an average of 30% on death, disability and funeral expenses; 29% on revenues; 28% on medical expenses; and 27% on productivity and absenteeism. Again, concern about the impact of HIV/AIDS on foreign direct investment was higher than average. 24% of respondents operating in countries where national prevalence is at 20% or more thought there had been minimal impact, while 12% serious impact on their country.

In Africa, the most seriously affected region, a larger group have seen severe impact on operating costs: 19% for productivity and absenteeism (48% in Zimbabwe and 39% in Zambia); 18% for medical expenses (42% in Zambia and 39% in Zimbabwe); 17% for death, disability and funeral expenses (39% Zambia); 12% for impact on revenue (26% in Malawi, 25% in Mozambique and 24% in Chad); and 12% for recruitment and training expenses (25% in Cameroon and Zambia).

Table 20 provides a different perspective on these data, showing responses only from those firms who believe HIV/AIDS has had or will have a serious impact on their firm (question 7.17c, see above):

- Here, a larger proportion have seen a serious impact on operating costs (scoring 1 or 2): 21.8% for productivity and absenteeism; 21.0% for medical expenses; 19.1% for death, disability and funeral expenses; 15.1% for recruitment and training expenses. These firms also report a relatively larger impact of HIV/AIDS on the other side of the accounting ledger, with 14.8% reporting a serious impact on revenue.
- In Africa, this group is slightly larger: 25.7% have seen serious impacts on productivity and absenteeism; 25.5% on medical expenses; 24.2% on death, disability and funeral expenses; 15.8% on recruitment and training expenses; 16.3% on revenue.
- It is notable that there is little variation from one category to another. Impact on productivity and

absenteeism appears to matter most to respondents; impact on revenue the least, which is consistent with findings reported above suggesting that labour force effects have the most tangible impact on businesses. The data also suggest that many businesses have yet to see operating costs increase substantially, even when they believe the epidemic will have a serious impact on their business. In other words, they think the worst is to come.

It is impossible to determine, however, on what basis other respondents made their answers. One suspects that many face a paucity of information to determine how the epidemic is currently affecting their business. It would be interesting, at least, to return to a sample of those predicting negative impacts to ascertain the nature of the evidence available to them and to learn more about the decision-making process they adopt as a result. These findings also suggest that there is a strong case for focusing attention and resources on the relatively small proportion of companies that perceive a serious problem – both in general and in terms of specific impact on their business. We explore this idea further in part 3.

How do businesses think communities will be affected?

Respondents were asked how serious they believed the current and future impact of HIV/AIDS was on the communities in which their businesses operate (Table 16). However, respondents were not asked their opinion of the impact of malaria and TB on their community, in the same way as they were on their company.

How serious do you consider the current and future impact of HIV/AIDS on your community?	Percent of firms
Serious impact	20%
Some impact	50%
Minimal impact	47%
No response	4%

Interestingly, firms report similar levels of concern for their communities as they do for their business. As reported above, 21% of firms expect serious impacts on their business, with 51% expecting little effect.

Table 21 also shows results by income group:

- 46% of respondents in countries within the low-income group believe that HIV/AIDS will have a serious impact on the communities in which they operate, with only 16% saying they do not expect any impact. In all other income groups a greater proportion of firms believe the epidemic will not be a problem for communities than believe it will have a serious impact.

- Firms in the low-income group anticipate a more serious impact on their business than on their communities. Respondents from all other income groups anticipated that the effects would be similar on their business and their communities.

Looking at the results by national HIV prevalence rates, meanwhile, shows more serious concern in countries with high-prevalence rates (77% in countries with 20%-plus infection levels, for example), than in those with low rates (just 9% of firms in less than 1% prevalence countries are seriously concerned about the impact on their communities, although a further 37% expect some impact).

- Looked at regionally, African firms are significantly more worried about the impact on their communities than the average. 55% select answers that suggest HIV/AIDS has had or will have a serious impact on their community (91% in Zimbabwe, 85% in Chad, 79% in Malawi and 79% in Botswana), with only 10% believing it is not a problem. In all other regions a greater proportion of firms believe the epidemic will not be a problem for communities than believe it will have a serious impact.
- Central America and the Caribbean is the next most concerned region, with 22% believing it has had or will have a serious impact on communities (50% in Jamaica, 43% in Trinidad & Tobago, 40% in Haiti). 14% of Asian respondents also believe it will have a serious impact (45% in Vietnam, 24% in China and 22% in Thailand). In all other regions, 10% or fewer firms are seriously worried.
- In all regions except Europe, firms perceived a slightly more serious impact on their companies than on their communities.

Table 22, meanwhile, shows the results of cross-classifying firms according to their opinions on the severity of the impact of HIV on their firm and on their community. It provides the following results:

- 15.9% of all respondents who provide answers to both questions believe that HIV/AIDS is a serious problem for both their company and their community. However, this figure is considerably higher in Africa, where 48.4% of respondents fall into this category, whereas figures from other regions are much lower.
- By contrast, when we separate out firms that indicate they expect only mild impacts from HIV/AIDS on both their firm and their community, we find that 41.4% of the overall sample (with non-missing data) falls into this category. But only 4.9% of African firms fall into this category, whereas the figures for the other regions are all much higher.
- The table also confirms that there are relatively few respondents who believe that the epidemic will be a serious problem for the community, but not for their firm (or vice versa). This, along with the slight tendency to be more concerned about company

than community impacts, provides evidence to suggest that firms generally do not believe they can avoid the problems a serious epidemic brings.

A regression analysis explores exploring factors that make a respondent more likely to believe HIV/AIDS is a serious problem for their community. As above, we test the effect of five sets of variables: the average regional severity of the epidemic; the national severity of the epidemic; the firm's own estimate of HIV prevalence among its workforce; per capita income in the country in which the firm operates; and the size of firm (more than 100 employees versus 100 employees or fewer). Also as above, the estimates can be interpreted as the answers to the following thought experiments:

- If one compared two firms that were identical with respect to their firm size category, the per capita income of the country in which they operated, and the region in which they operated, would a more severe HIV epidemic at the national or firm levels be associated with a perception of more severe adverse impact on the community?
- If one compared two firms that were subject to identical HIV shocks at the national and firm levels, is there a tendency for their perception of the severity of the epidemic's adverse impact on the community to vary with firm size (better or worse for large firms), the per capita income of the country in which they operate (better or worse for firms in high income countries), and the region in which they operated (better or worse in different regional settings).

The results are based on 4,617 firms for which data on the different variables included in the regression analysis were available. They provided the following findings:

- Respondents perceive a more adverse impact on their community when they are in countries with more severe epidemics and when they estimate higher rates of HIV prevalence among their workforces. This result applies to firms that are comparable in terms of country income, region of location and firm size. Again, these results are highly plausible and consistent, indicating executives' expectations of the impact of HIV on their communities are systematically related to the HIV threats they perceive at the local (workforce) and national levels.
- Respondents also perceive a more adverse impact on their communities when they are located in North America or in countries with low income. They perceive a less adverse impact when they are located in the Middle East and North Africa. There are no firm size effects on the impact of HIV on the community, as one would expect. The foregoing results apply to firms that are comparable in terms of the HIV threats they perceive for their workforce and customer bases (as proxied by their estimate of workforce HIV and UNAIDS national estimate of adult HIV).

Taken as a whole, the responses to question 7.18 are broadly similar to those relating to impact on company. The significance of this is worth underlining, however.

Business leaders seem to make little distinction between the impact of AIDS on their community or on their business, seeming to accept that any costs they bear will be in line with any costs the community is likely to face.

How is business responding?

Respondents were asked about the state of HIV/AIDS policy in their companies (see Table 23). Many companies have been urged to develop written policies, but few seem to have done so:

Do you have an HIV/AIDS-specific written policy	Percent of firms
No	83%
Yes	6
No response	11%

- 3% of firms have a written policy that has been signed and approved by the board. 2% of firms have a committee which meets regularly to ensure policy implementation, monitoring and review.
- Even among the sub-sample of businesses that expect the epidemic to have a serious impact on the firm or community, only 11.3% indicate they have a written HIV policy. Concerned firms in countries with high HIV prevalence are slightly, but not significantly, more likely to have a written policy than firms in less-affected countries.
- Respondents operating in low income and upper middle income countries are also marginally more likely to have a written policy than those in the other groups (the upper middle income group includes both South Africa and Botswana, two of the five countries where national prevalence is at 20% or above).
- Respondents in countries with high HIV prevalence rates are significantly more likely to have written policies. 27% of firms in countries with 20% prevalence or more have written policies, compared to 4% in countries with less than 1% prevalence and 6% in countries with 1-4% prevalence. 19% of policies in the highest-prevalence countries have been approved at board level.
- More African firms have written policies (12%) than those operating in any other region (53% of South African firms have a written policy, along with 30%

in Botswana, 26% in Rwanda and 21% in Namibia). Respondents in Asia were next most likely to have a written policy (8%), followed by North America (7%). None of the businesses taking part in Oceania has a written policy. Elsewhere, Indonesia (where 39% of firms have written policies) and Brazil (24%) have the highest proportion of firms with policies.

Respondents were then asked whether their HIV policies addressed issues under the following headings:

- Prevention programme elements;
- Target of prevention activities;
- Care, support and treatment;
- Coverage of care, support and treatment;
- Discrimination and disclosure policy.

Within each of these five areas, there are from three to five different issues addressed. For each, there are three response options: No (i.e. policy does not address this issue); yes, but not implemented; and yes. Although most firms report having no written policies, some nevertheless claim to implement the measures asked about. This is likely to be due to the policy not being written down. We have therefore analysed this question on the basis of all responses rather than just those of firms that have written policies.

Prevention programmes primarily focus on providing information to employees:

- 16% of prevention programmes provide information about the risks of infection. 9% provide condoms and 9% voluntary, confidential and anonymous HIV testing.
- A small proportion of firms include these measures in their policies but do not implement them. With voluntary testing, 6% of firms with written policies fall into this bracket; with information provision, 6% of firms; and with condom provision, 4% of firms.
- The target of the prevention programmes is fairly broad, although the principal target is the workforce. 8% of prevention programmes target high-risk employee groups; 5% target employee partners and families; 4% target surrounding communities; 4% target high-risk community groups; and 3% target suppliers, contractors or customers.

Responses by income group show that:

- 24% of prevention programmes in firms operating in a low-income group country provide information about the risks of infection, compared with 10% in the high-income group. Similarly, 18% in low-income group countries provide condoms (3% among high income group respondents) and 12% voluntary, confidential HIV testing (7% in the high income group).

- Respondents operating in low-income group countries are more likely to report that these policies are not implemented. With the provision of information, this stands at 10% (3% in the high income group), 9% with voluntary testing (3% in the high income group) and 8% with the provision of condoms (2% in the high income group).

Analysis by national HIV prevalence rates according to UNAIDS indicates:

- 55% of prevention programmes in firms operating in countries where national infection rates run at 20% and above provide information about the risks of infection, compared with 12% in those with prevalence rates of below 1%. Similarly, 43% provide condoms (5% in those with prevalence below 1%) and 35% voluntary, confidential HIV testing (compared with 7% in countries with prevalence below 1%).
- Respondents operating in countries where national prevalence is at 20% or above report similar levels of policy implementation to those in countries with lower infection rates.

When results are analysed by region:

- 30% of prevention programmes in African firms provide information about the risks of infection. Similarly, 25% provide condoms and 17% voluntary, confidential HIV testing.
- Respondents operating in Africa are more likely to report that these policies are not implemented. With the provision of information, this stands at 11% (compared to 0% in Oceania), 10% with voluntary testing and 8% with the provision of condoms (0% in Oceania).

Care and treatment programmes also target both workers and their communities with a range of measures, although there is a high non-response rate to these questions:

- 10% of programmes provide diagnosis and treatment of sexually transmitted diseases; 7% provide treatment for opportunistic infections; 5% provide anti-retroviral drugs to all HIV positive employees; 6% provide anti-retrovirals for special situations and 4% provide home-based care for ill-health retirees.
- Again, there is a significant percentage of firms that incorporate care and treatment components into their written policies without enacting them. With both treatment for opportunistic infections and with the provision of anti-retrovirals to HIV positive employees, for example, 4% of firms do not enact their policies. 4% fall into this bracket when pledging to provide antiretroviral drugs for special situations, and 4% with diagnosis and treatment of STDs. The data does not tell us, however, whether these firms are failing to attempt to enact policies, or whether the problem is that take-up of their policies is low.

- Treatment programmes are primarily targeted at employees. 14% are available to all employees and 7% to some employees. 10% are available to dependents of employees.

Responses by income group show that:

- 14% of respondents operating in low-income group countries provide diagnosis and treatment for STDs, compared with 7% in lower middle-income group areas. 10% provide treatment for opportunistic infections (4% in lower middle-income areas); 7% provide anti-retrovirals to all HIV positive employees (3% in lower middle-income areas); 7% provide anti-retrovirals in special situations (4 in lower middle-income areas) and 5% provide home-based care for ill-health retirees (3% in lower middle-income areas).
- Further, those operating in low-income areas are slightly more likely to say their firm's policies are not implemented. 6% report that this is the case on diagnosis and treatment for STDs (2% in high-income areas); 6% on treatment of opportunistic infections (2% in high-income areas); 7% on the provision of anti-retrovirals to all infected employees (2% in high-income areas); 7% on the provision of anti-retrovirals in special situations (2% in high-income areas) and 5% on the provision of home-based care (2% in high income areas).
- 16% of programmes run by firms operating in low-income group countries are available to all employees (10% in lower middle-income areas and 18% in upper middle-income areas); 11% are available to some employees (6% in high-income areas) and 12% are available to dependents of employees (14% in upper middle-income areas and 6% in lower middle-income areas).

Analysis by national HIV prevalence indicates:

- 37% of firms operating in countries with national infection rates of 20% or above provide diagnosis and treatment for STDs, compared with 8% among those in the lowest prevalence areas. 26% provide treatment for opportunistic infections (6% in lowest prevalence areas); 19% provide anti-retrovirals to all HIV positive employees (5% in lowest prevalence areas); 21% provide anti-retrovirals in special situations (5% in lowest prevalence areas) and 10% provide home-based care for ill-health retirees (4% in lowest prevalence areas).
- Respondents based in countries where national prevalence is at 20% or higher generally report slightly lower levels of unimplemented policies than those in areas with infection rates of between 1 and 19%, but are more likely to have unfulfilled policies than firms in the lowest prevalence areas. However, in the case of provision of anti-retroviral drugs to all HIV positive employees, respondents from the highest prevalence areas are also most likely to report their policy is not implemented (9%, compared with 3% in lowest prevalence areas).

- 39% of programmes operated by firms in high-prevalence areas are available to all employees (12% in lowest prevalence areas); 26% are available to some employees (6% in lowest prevalence areas) and 32% are available to dependants of employees (8% in lowest prevalence areas).

When results are analysed by region:

- 17% of programmes run by firms in Africa provide diagnosis and treatment of STDs. 13% provide treatment for opportunistic infections (compared to 16% in North America); 9% provide anti-retroviral drugs to all HIV positive employees (compared with 15% in North America); 10% provide anti-retrovirals in special situations and 6% provide home-based care for ill-health retirees (9% in North America).
- Again, respondents in Africa are somewhat more likely to say that policies are not implemented in their business. 6% report that this is the case with diagnosis and treatment for STDs (versus 0% in Oceania and North America); 7% with treatment of opportunistic infections (2% in North America); 7% with the provision of anti-retrovirals to all infected employees (3% in Oceania); 7% with the provision of anti-retrovirals in special situations (0% in North America); 6% with the provision of home-based care.
- 20% of programmes in African firms are available to all employees (30% in North America); 14% are available to some employees (3% in Middle East/North Africa) and 15% are available to dependants of employees (26% in North America).

Respondents were also asked about their discrimination and disclosure policies and practices. A relatively high proportion of firms with written policies do not rule out discrimination against HIV-infected workers:

- 34%, for example, do not rule out required disclosure of HIV status for current and future employees, with 15 prohibiting such disclosure.
- 33% do not prohibit discrimination in promotion, pay or benefits based on HIV status. 15%, on the other hand, rule this out.
- Finally, 33% do not prohibit discrimination in recruitment policies, compared to 14% that do prohibit this.

Despite the dearth of policies and programmes, and the inconsistent nature and implementation of those policies that do exist, many executives nevertheless believe their companies' current policies and programmes are sufficient to cope with the impact of AIDS (Table 23). It may be that some firms incorporate HIV/AIDS into overall health policies rather than having a specific HIV/AIDS policy.

Do you believe that your company's current policies and programmes are sufficient? (Table 24)	Percent of Firms
Strongly lacking confidence	18%
Strongly confident	32%

Much of this confidence is found in high-income countries, where 63% are very confident that existing policies will cope with HIV/AIDS and only 4% very worried about the effectiveness of current policies. In low-income countries, on the other hand, 31% are very dissatisfied with existing policies, with just 16% very satisfied.

A similar pattern occurs when the responses are looked at by national HIV prevalence levels. Firms in countries with high-prevalence rates are much less satisfied with their existing HIV/AIDS policies than firms in low-prevalence settings. 31% of firms in countries with HIV prevalence of 20% or over are very dissatisfied with their policies, compared to just 13% in countries with prevalence below 1%.

At a regional level, African firms are the least satisfied with their policies. 32% are strongly lacking in confidence, and only 16% are strongly confident (firms in Cameroon (64% very dissatisfied), Ethiopia (49%), Mozambique (48%) and Angola (43%) are the most concerned). In Central America/Caribbean, 27% of firms strongly lack confidence (40% in Jamaica and 36% in Trinidad & Tobago), while in South America 21% are very concerned. In North America, by contrast, only 2% of firms are very dissatisfied with their policies. Outside Africa, firms in the Ukraine are particularly concerned that their existing policies are unsatisfactory: 55% of firms are strongly lacking in confidence with just 6% strongly confident.

Those few firms that do have written HIV policies, then, differ in their approach to the virus. Many have policies aimed at avoiding the effects of AIDS. Others, by contrast, have acted positively to solve the problem strategically by targeting a wide range of actors with a pre-emptive menu of policies. This variation is consistent with findings from a major United Nations study of the world's largest transnational corporations and mining concerns and the largest firms from a group of developing countries. This study found "a wide variation in the specific HIV/AIDS prevention and mitigation components of ... corporate policies and programmes, and the extent of coverage provided to employees and their dependants". It also found that most programmes targeted employees rather than communities and suppliers, despite firms' concerns that impacts on the latter will translate into effects on their business.⁵³

Most firms, however, have no HIV-specific policies at all, even if they are concerned about the virus or operate in settings where it has had a devastating

effect. Many that do have policies, particularly in low-income, high HIV prevalence countries, feel that those policies are not equipped to cope with the epidemic. In the next section, we discuss whether the policy environment in a country contributes to the lack of effective activity, and whether business-friendly environments in turn have an effect on firms' attitudes and responses to the virus.

How does the policy environment impact the business response?

In part 1, we discussed the importance of the policy environment to health, as a determinant of how effectively society responds to health threats and as an important factor influencing the scale of benefits a society can expect as health improves. An important and distinctive advantage of the GCR Executive Opinion Survey is that it places a number of questions about HIV/AIDS within a survey covering a range of other issues. In this section, we explore responses to the HIV/AIDS questions within the context of questions addressing governance issues.

A series of ordered logit regressions explores whether perceptions of the severity of the impact of HIV on their businesses are related to their opinions on a range of other issues involving governance, social policy, economic policy or social capital.⁵⁴ As above, the estimates can be interpreted as the answers to the following thought experiment:

- If one compared two firms that were identical with respect to their firm size category, the per capita income of the country in which they operated, the region in which they operated, and the HIV/AIDS shocks they face at national and firm levels, would various governance, social policy, economic policy or social capital indications be associated with a perception of more severe adverse impact from HIV/AIDS on the company?

The results provided the following findings:

- There is no relationship between the 12-month growth forecast for the country economy and the impact of HIV/AIDS (question 2.01). Any correlations, therefore, between HIV impact and governance indicators cannot be explained away by generalized feelings of business confidence.
- A number of governance indicators are significantly related to the impact of HIV/AIDS on the firm. An effective national legislative body (question 4.01), a low burden from government red tape (question 4.04), clear and transparent government information on policies and regulations (question 4.10), and a more neutral government approach to making decisions on policies and contracts (question 4.11) all lower the anticipated burden of HIV/AIDS on the firm.

- Two further governance indicators – civil service competence (question 4.03) and the degree of centralization in economic policy-making – appear to have no effect on the predicted impact of HIV on the firm.
- A number of social policy indicators are significantly related to the anticipated impact of HIV/AIDS on the company. Effective government efforts to reduce poverty (question 5.18) and income inequality (question 5.19), better public schools (question 7.01) and more effective educational systems (question 7.07), and more equal healthcare for rich and poor (question 7.06) all lower the anticipated burden of HIV/AIDS on the firm.
- Economic policy indicators are also significantly related to the impact of HIV/AIDS on the company. Strong intellectual property protection (question 5.03), a lower proportion of unregistered businesses (question 5.07), greater gender equity in employment (question 7.12) and earnings (question 7.13), stronger infrastructure (question 6.01), flexible hiring and firing of workers (question 7.02) and cooperative labour relations (question 7.03) all lower the anticipated the burden of HIV/AIDS in the firm.
- There is also a weaker relationship between two other economic policy indicators – decentralized wage setting (question 7.04) and pay related to productivity (question 7.05) – and the impact of HIV/AIDS on the firm.
- Finally, we find a significant relationship between two indicators of levels of social capital and the impact of HIV/AIDS on the firm. A freer media (question 5.06) and high public trust in the financial honesty of politicians (question 4.02) lower the anticipated burden of HIV/AIDS on the firm.
- However, there are no significant relationships between two other indicators of social capital and the impact of HIV/AIDS. Strong traditions of charity (question 5.17) and of company encouragement to workers to volunteer for social causes (question 5.20) seem to have no effect on the impact of HIV on the firm.

These are thought-provoking findings⁵⁵, consistent with two different conclusions:

- *The first results from treating the various governance, social policy, economic policy and social capital indicators as a package. It argues that business leaders expect a lesser impact from HIV/AIDS on their firm and community if they live in a society that is generally well governed and organized.*

- *The second treats the various governance, social policy, economic policy and social capital indicators separately. It argues that business leaders expect a lesser impact from HIV/AIDS on their business and community if they live in a society where specific policy goals are met (greater gender equity, better healthcare, or less red tape, for example).*

The survey does not provide data that allow us to distinguish between these conclusions. However, the results lend weight to suggestions that government transparency and effectiveness, freedom of information and effective poverty reduction programmes are all felt to be helpful by business leaders concerned by HIV/AIDS. It is also interesting to see the importance of those factors which indicate whether or not government is seen as an honest, fair and effective partner for the private sector, as serious business responses to the epidemic will almost certainly have to be conducted in partnership with other actors. Perhaps most importantly, it underlines the importance to respondents of a cross-governmental response to the. Business leaders appear to believe that HIV/AIDS can be more successfully tackled in countries that enjoy a general standard of good government – that this very serious health problem merits more than a simple health response.

Summary

The survey data suggests, then, that firms currently believe few employees are infected with HIV, and that there are currently only minor impacts on operating costs. The virus is, however, seen as a serious problem, especially in high-prevalence and low-income regions and countries. Where governance is weak, too, firms are more concerned about the threat, to both their business and their communities. Interestingly, executives expect similar impacts on both: where communities are hard-hit by HIV/AIDS, firms do not believe they will be immune to the impacts.

Despite these concerns, however, few firms have HIV/AIDS policies in place. Fewer still implement these policies. In the final section, we discuss what businesses can do about HIV/AIDS, and where their efforts are likely to be most effective.

Part 3: Conclusions

What have we learned

Taken as a whole, the Executive Opinion Survey suggests three important conclusions on business and its current level and quality of response to the HIV/AIDS epidemic:

1. *Firms are not particularly active in combating HIV/AIDS, even when they expect the epidemic to cause serious problems for their business.*

47% of the business leaders polled felt that HIV/AIDS is having or will have some impact on their business, and 21% estimate a serious impact. HIV/AIDS is consistently regarded as a more serious threat than either malaria or tuberculosis, both globally and across all regions.

Respondents do not believe they will be immune to the virus when it makes inroads on their local communities. Businesses estimate roughly the same level of impact on the communities in which they operate as on the firm itself (overall, 20% perceive a serious impact on the community and 21% on the firm). Business leaders' levels of concern about HIV/AIDS also rise in line with prevalence rates in their country of operation. For example, in Africa, where infection rates are highest, 89% of firms report some impact and 60% a serious impact.

Even in areas where prevalence rates are high, there are many firms that do not believe they will be affected by HIV/AIDS. Globally, moreover, fewer than 6% of businesses surveyed have an HIV/AIDS-specific written policy that has received formal approval, and firms that report a serious current or future impact from the epidemic are only twice as likely to have a programme in place. Even among those firms that have conducted workforce surveys, only 15% have board-approved policies.

Despite the dearth of policies and programmes, and the inconsistent nature and implementation of those that do exist, 37% of all business leaders are satisfied with their response to HIV/AIDS, despite relatively low levels of activity. However, firms become less sanguine in areas where the epidemic is at its worst.

2. *Businesses appear to be making decisions based on a patchy assessment of the risks they face.*

Among those who report a severe current or future impact from HIV/AIDS, fewer than 25% can point to specific areas of the business that the virus will affect. Further, two thirds of business leaders have not seen a serious impact against any of the five operating indicators.

This finding suggests one of two scenarios. Either many businesses anticipate that they will face increased costs as a result of HIV/AIDS, but only in the future, or they are drawing on insufficiently sophisticated information to disaggregate the impact of the epidemic from other factors affecting business performance.

Business leaders also find estimating HIV prevalence rates among their workforce problematic. Over a third did not answer this question, and just 18% overall have conducted a quantitative survey among their employees.

Respondents systematically believe that a smaller proportion of their workforce is HIV positive than national prevalence rates would predict, a difference that is more, not less pronounced among those that have carried out studies. This finding suggests that either these businesses are using faulty data, or that their employees are indeed less likely to be infected than average, either due to the type of workers they employ, or to the success of their prevention programmes.

3. *Firms seem to favour a broad social response to the epidemic, even if only a small number of businesses currently see themselves as an integral part of that response.*

Confidence in managing the threat of HIV/AIDS among businesses is affected by broader perceptions of how well equipped they believe their country to be to cope with a range of other pressing issues. In other words,

businesses seem to expect a lesser impact from the epidemic if they live in a society that is generally well governed.

Firms with equal prevalence rates (both self-reported and as reported by UNAIDS country figures) think HIV/AIDS will have less of an effect both on the company and community, the more confident they are in a range of governance, economic policy and social policy indicators. Government transparency, freedom of information and effective poverty reduction programmes are all felt to be helpful by business leaders concerned by HIV/AIDS. In other words, business leaders seem to support the view that serious public health problems merit more than a health-based response.

How to turn back the 'lethal march'

Society would undoubtedly benefit significantly if businesses made a greater contribution to tackling the HIV/AIDS epidemic. However, the observed failure to act suggests that firms lack either information or incentives. In the former case, they may not be able to assess the risks they face, the costs of acting and the potential benefits from successful action accurately. In the latter case, there may be significant externalities, where the benefit from action accrues not just to the business that funds the action, but to the wider society. This suggests an agenda for future action.

Accurate, objective and unbiased information on HIV/AIDS must be generated and disseminated, covering areas such as workforce prevalence, the impact of the epidemic on business at different prevalence levels and the cost effectiveness of business-sponsored prevention activity. Studies must be rigorous in their attention to the potential for externalities, taking account of frequently practiced responses, such as where a business chooses to employ new workers rather than provide benefits for sick workers. There should be particular emphasis on demonstrating, beyond question, specific activities for which business can expect an adequate rate of return for any investment they make.

The potential of business associations and coalitions to tackle HIV/AIDS should continue to be utilized, as firms have a greater incentive to participate in and sponsor prevention activity if they can focus on the problems facing an industry sector or geographical area. Coalitions are also able to share experience and spread the cost of developing tools and approaches, ensuring lower start-up costs and greater efficiencies.

Public-private partnerships should be considered where they capitalize on the relative strengths of and incentives enjoyed by governments, NGOs and businesses. Governments and NGOs should continue to use moral suasion to make firms more likely to act, while being aware of the capacity and financial

constraints facing many firms. But governments can also use policy to make action more likely, although they must tread lightly if they are not to generate further ill economic effects. Governments can also design contracts, tax relief programmes and other types of incentives to reward business action or part-fund activity through the public purse.

What else we need to know

Inclusion of questions on the impact of HIV/AIDS on business and firms' response to the epidemic is a new component of the Executive Opinion Survey. The results and conclusions of the 2003 study suggest that in future years it will be important for this part of the survey to focus on specific testing of the following set of hypotheses:

- Do businesses perceive AIDS to be a significant business issue?
- What information do they use to assess risks?
- Do businesses believe they can respond effectively to the epidemic? Why/why not?
- What are the components of their response? How much do they spend? Can they quantify any benefits they receive?
- What other policy interventions make business more or less likely to respond?
- How do these data vary according to company size, business sector, seniority of respondent, region, national income group and national prevalence rates?

Data that deals with these questions will inform business leaders and policy-makers alike, and equip them to manage the threat of HIV/AIDS more effectively in three key ways.

First, it will provide specific measures of the relationship between business concern and related action on combating the epidemic at firm level, in terms of workforce, customer and community impacts. Second, it will demonstrate the extent of business's ability to quantify and measure the human and financial impacts it is experiencing, or expects to face. And third, it will open up a dialogue between business and policy-makers on how public and private sectors can most effectively collaborate to arrest the 'lethal march' of HIV/AIDS on a global basis.

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- ⁵⁴ Ordered logit analysis is a form of multiple regression analysis that is appropriate to the analysis of a dependent variable that takes on integer values and has a natural ordering, e.g., a response of 7 to question 7.17c is closer to a response of 6 than it is to a response of 2.
- ⁵⁵ These findings are largely duplicated when we consider the relationship between the above indicators and the impact of HIV/AIDS on the community in which a respondents business or businesses operate.

Appendix and Tables

Appendix 1: Reporting the data

Many of the questions on HIV/AIDS include seven-point Likert scales. The World Economic Forum practice is for numbers 1 to 3 on the scale to equal agreement with the left-hand proposition, 5-7 to equal agreement with the right-hand proposition, and 4 to be neutral. There are two types of seven-point scales employed in the HIV/AIDS section of the questionnaire:

- Type 1 (used by most questions) requires a respondent to score impact against a 1-7 scale, where 1 means extremely serious impact and 7 means not a problem, or no impact at all. Logically, any answer other than 7 implies at least some impact - although this contradicts World Economic Forum instructions to treat 4 as neutral. The data are therefore difficult to interpret, but we have decided the best way is to set three standards – 1-2 as a serious impact, 1-5 for some impact and 6-7 for minimal impact. This does not provide numbers that sum neatly to 100%, but appears to be the best possible interpretation in other regards.
- Type 2 (used in only one question), which uses a seven-point Likert scale and where 1-3 clearly indicates the negative, 4 neutrality, and 5-7 the positive. We have also reported 1-2 (strongly negative) and 6-7 (strongly positive).

The table below shows how each question is reported.

Question Topic	Left-hand scale	Right-hand scale	Method for reporting data
7.17a-c Impact of malaria, TB and HIV/AIDS on company.	Extremely serious	Not a problem	1-2 A serious impact 1-5 Some impact 6-7 Minimal impact
7.18 Impact of HIV/AIDS on community.	Extremely serious	Not a problem	1-2 A serious impact 1-5 Some impact 6-7 Minimal impact
7.19 Effectiveness of policies and programmes.	Current policies and programmes will not be sufficient and/or effective.	Current policies and programmes will not be sufficient and/or effective.	1-3 Not confident in effectiveness 4 Neutral - neither confident nor not confident 5-7 Confident in effectiveness 1-2 Strongly lacking in confidence 6-7 Strongly confident
7.20 Access to FDI	Significant reduction in our country's access to foreign direct investment	No impact on our country's access to foreign direct investment	1-2 A serious impact 1-5 Some impact 6-7 Minimal impact
7.21a Estimate of workforce prevalence	Tick prevalence category or don't know		Report proportion in each category and proportion of don't knows/no responses
7.21b Estimate based on study	- Yes - No		Report proportion of yes, proportion of no and proportion of don't know/no response
7.22 State of HIV/AIDS policy	- No policy - Board approved - Union approved - Monitoring committee		Report proportion of No Policy. Report proportion checking one of board approved, union approved, monitoring committee as "formal policy". Some companies may have policies that are not board or union approved, or monitored by committee. No other conclusions are possible from this question due to confusion over multiple check boxes (both respondents and in coding of survey)
7.23 Current impact on various aspects of business	Significant negative impact	Not relevant	1-2 A serious impact 1-5 Some impact 6-7 Minimal impact
7.24 Features of HIV/AIDS policy and programme	- No - Yes but not implemented - Yes		Proportion in each category Report for all respondents Report for respondents with formal policy (question 7.22 as filter)

Table 1: Firms surveyed compared to population by region

Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)	Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)
Africa			Europe (...continued)		
Angola	47	13'512	Finland	36	5'188
Botswana	56	1'695	France	93	59'191
Cameroon	56	15'197	Germany	72	82'333
Chad	84	7'916	Greece	98	10'591
Ethiopia	85	65'816	Hungary	106	10'187
Gambia	79	1'341	Iceland	27	282
Ghana	174	19'708	Ireland	40	3'839
Kenya	75	30'736	Italy	48	57'948
Madagascar	93	15'976	Latvia	184	2'359
Malawi	34	10'526	Lithuania	134	3'482
Mali	37	11'094	Luxembourg	34	441
Mauritius	32	1'200	Macedonia	114	2'035
Mozambique	75	18'071	Malta	78	395
Namibia	47	1'792	Netherlands	84	16'039
Nigeria	198	129'875	Norway	27	4'513
Rwanda	50	7'933	Poland	92	38'641
Senegal	27	9'768	Portugal	46	10'024
South Africa	62	43'240	Romania	96	22'408
Tanzania	69	34'450	Russian Federation	264	144'752
Uganda	148	22'788	Serbia	100	10'651
Zambia	59	10'283	Slovak Republic	71	5'404
Zimbabwe	33	12'821	Slovenia	87	1'992
Africa subtotal	1,620 (20.8%)	485,737 (8.9%)	Spain	70	41'117
Asia			Sweden	28	8'894
Bangladesh	76	133'345	Switzerland	73	7'231
China	110	1'271'850	Ukraine	67	49'093
Hong Kong	60	6'725	United Kingdom	65	58'800
India	63	1'032'355	Europe subtotal	2,857 (36.7%)	705,488 (12.9%)
Indonesia	38	208'981	Middle East and North Africa		
Japan	72	127'035	Algeria	71	30'835
Korea	103	47'343	Egypt	104	65'177
Malaysia	96	23'802	Israel	21	6'363
Pakistan	49	141'450	Jordan	85	5'031
Philippines	47	78'317	Morocco	101	29'170
Singapore	120	4'131	Tunisia	75	9'674
Sri Lanka	86	18'732	Turkey	46	68'529
Taiwan	43	n/a	Middle East and North Africa subtotal	503 (6.5%)	214,778 (3.9%)
Thailand	45	61'184	North America		
Vietnam	118	79'526	Canada	75	31,082
Asia subtotal	1,126 (14.5%)	3,234,777 (59.0%)	United States	52	285,318
Central America & Caribbean			North America subtotal	127 (1.6%)	316,400 (5.8%)
Costa Rica	70	3'873	Oceania		
Dominican Republic	35	8'505	Australia	18	19,387
El Salvador	48	6'400	New Zealand	70	3,849
Guatemala	61	11'683	Oceania subtotal	88 (1.1%)	23,236 (0.4%)
Haiti	25	8'132	South America		
Honduras	82	6'585	Argentina	61	37'488
Jamaica	58	2'590	Bolivia	79	8'515
Mexico	105	99'420	Brazil	63	172'386
Nicaragua	71	5'205	Chile	170	15'402
Panama	75	2'897	Colombia	63	43'035
Trinidad and Tobago	61	1'310	Ecuador	98	12'879
Central America and Caribbean subtotal	691 (8.9%)	156,599 (2.9%)	Paraguay	65	5'390
Europe			Peru	79	26'347
Austria	83	8'132	Uruguay	65	3'361
Belgium	46	10'286	Venezuela	34	24'632
Bulgaria	167	7'913	South America subtotal	777 (10%)	349,435 (6.4%)
Croatia	111	4'381	Grand total		
Czech Republic	109	10'224	7,789	5,486,451	
Denmark	42	5'359			
Estonia	65	1'364			

Table 2: Firms surveyed compared to population by country's income group

Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)	Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)
Low income			Upper middle income		
Angola	47	13'512	Argentina	61	37'488
Bangladesh	76	133'345	Botswana	56	1'695
Cameroon	56	15'197	Brazil	63	172'386
Chad	84	7'916	Chile	170	15'402
Ethiopia	85	65'816	Croatia	111	4'381
Gambia	79	1'341	Czech Republic	109	10'224
Ghana	174	19'708	Estonia	65	1'364
Haiti	25	8'132	Hungary	106	10'187
India	63	1'032'355	Korea	103	47'343
Indonesia	38	208'981	Malaysia	96	23'802
Kenya	75	30'736	Malta	78	395
Madagascar	93	15'976	Mauritius	32	1'200
Malawi	34	10'526	Mexico	105	99'420
Mali	37	11'094	Panama	75	2'897
Mozambique	75	18'071	Poland	92	38'641
Nicaragua	71	5'205	Slovak Republic	71	5'404
Nigeria	198	129'875	South Africa	62	43'240
Pakistan	49	141'450	Trinidad and Tobago	61	1'310
Rwanda	50	7'933	Uruguay	65	3'361
Senegal	27	9'768	Venezuela	34	24'632
Tanzania	69	34'450	Upper middle income subtotal	1,615	544,771
Uganda	148	22'788		(20.7%)	(9.9%)
Ukraine	67	49'093	High income		
Vietnam	118	79'526	Australia	18	19'387
Zambia	59	10'283	Austria	83	8'132
Zimbabwe	33	12'821	Belgium	46	10'286
Low income subtotal	1,930	2,095,898	Canada	75	31'082
	(24.8%)	(38.2%)	Denmark	42	5'359
Lower middle income			Finland	36	5'188
Algeria	71	30'835	France	93	59'191
Bolivia	79	8'515	Germany	72	82'333
Bulgaria	167	7'913	Greece	98	10'591
China	110	1'271'850	Hong Kong	60	6'725
Colombia	63	43'035	Iceland	27	282
Costa Rica	70	3'873	Ireland	40	3'839
Dominican Republic	35	8'505	Israel	21	6'363
Ecuador	98	12'879	Italy	48	57'948
Egypt	104	65'177	Japan	72	127'035
El Salvador	48	6'400	Luxembourg	34	441
Guatemala	61	11'683	Netherlands	84	16'039
Honduras	82	6'585	New Zealand	70	3'849
Jamaica	58	2'590	Norway	27	4'513
Jordan	85	5'031	Portugal	46	10'024
Latvia	184	2'359	Singapore	120	4'131
Lithuania	134	3'482	Slovenia	87	1'992
Macedonia	114	2'035	Spain	70	41'117
Morocco	101	29'170	Sweden	28	8'894
Namibia	47	1'792	Switzerland	73	7'231
Paraguay	65	5'390	Taiwan	43	n/a
Peru	79	26'347	United Kingdom	65	58'800
Philippines	47	78'317	United States	52	285'318
Romania	96	22'408	High income subtotal	1,630	876,089
Russian Federation	264	144'752		(20.9%)	(16.0%)
Sri Lanka	86	18'732	Unclassified		
Thailand	45	61'184	Serbia	100	10,651
Tunisia	75	9'674	Grand Total	7,789	5,486,451
Turkey	46	68'529			
Lower middle income subtotal	2,514	1,959,042			
	(32.3%)	(35.7%)			

Table 3: Firms surveyed compared to population by country's UNAIDS HIV prevalence estimates

Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)	Country	Firms Surveyed 2003 (number)	Estimated Population 2001 (thousands)
Prevalence < 1%			Prevalence < 1% (...continued)		
Algeria	71	30'835	United States	52	285'318
Argentina	61	37'488	Uruguay	65	3'361
Australia	18	19'387	Venezuela	34	24'632
Austria	83	8'132	Vietnam	118	79'526
Bangladesh	76	133'345	Prevalence <1% subtotal	5,564	4,859,251
Belgium	46	10'286		(71.4%)	(88.6%)
Bolivia	79	8'515	Prevalence 1-4%		
Brazil	63	172'386	Chad	84	7'916
Bulgaria	167	7'913	Dominican Republic	35	8'505
Canada	75	31'082	Estonia	65	1'364
Chile	170	15'402	Gambia	79	1'341
China	110	1'271'850	Ghana	174	19'708
Colombia	63	43'035	Guatemala	61	11'683
Costa Rica	70	3'873	Honduras	82	6'585
Croatia	111	4'381	Jamaica	58	2'590
Czech Republic	109	10'224	Mali	37	11'094
Denmark	42	5'359	Panama	75	2'897
Ecuador	98	12'879	Thailand	45	61'184
Egypt	104	65'177	Trinidad and Tobago	61	1'310
El Salvador	48	6'400	Ukraine	67	49'093
Finland	36	5'188	Prevalence 1-4% subtotal	923	185,269
France	93	59'191		(11.9%)	(3.4%)
Germany	72	82'333	Prevalence 5-9%		
Greece	98	10'591	Angola	47	13'512
Hong Kong	60	6'725	Ethiopia	85	65'816
Hungary	106	10'187	Haiti	25	8'132
Iceland	27	282	Nigeria	198	129'875
India	63	1'032'355	Rwanda	50	7'933
Indonesia	38	208'981	Tanzania	69	34'450
Ireland	40	3'839	Uganda	148	22'788
Israel	21	6'363	Prevalence 5-9% subtotal	622	282,506
Italy	48	57'948		(8.0%)	(5.1%)
Japan	72	127'035	Prevalence 10-14%		
Jordan	85	5'031	Cameroon	56	15,197
Korea	103	47'343	Mozambique	75	18,071
Latvia	184	2'359	Prevalence 10-14% subtotal	131	33,269
Lithuania	134	3'482		(1.7%)	(0.6%)
Luxembourg	34	441	Prevalence 15-19%		
Macedonia	114	2'035	Kenya	75	30,736
Madagascar	93	15'976	Malawi	34	10,526
Malaysia	96	23'802	Prevalence 15-19% subtotal	109	41,262
Malta	78	395		(1.4%)	(0.8%)
Mauritius	32	1'200	Prevalence >20%		
Mexico	105	99'420	Botswana	56	1'695
Morocco	101	29'170	Namibia	47	1'792
Netherlands	84	16'039	South Africa	62	43'240
New Zealand	70	3'849	Zambia	59	10'283
Nicaragua	71	5'205	Zimbabwe	33	12'821
Norway	27	4'513	Prevalence >20% subtotal	257	69,830
Pakistan	49	141'450		(3.3%)	(1.3%)
Peru	79	26'347	Unclassified		
Philippines	47	78'317	Paraguay	65	5,390
Poland	92	38'641	Taiwan	43	n/a
Portugal	46	10'024	Tunisia	75	9,674
Romania	96	22'408	Grand Total	7,789	5,486,451
Russian Federation	264	144'752			
Senegal	27	9'768			
Serbia	100	10'651			
Singapore	120	4'131			
Slovak Republic	71	5'404			
Slovenia	87	1'992			
Spain	70	41'117			
Sri Lanka	86	18'732			
Sweden	28	8'894			
Switzerland	73	7'231			
Turkey	46	68'529			
United Kingdom	65	58'800			

Table 4: Response rate by question

Question		Missing responses	
Number	Description	Number	Percent
7.17 c	How serious do you consider the current and future impact of HIV/AIDS on your company?	151	2%
7.18	How serious do you consider the current and future impact of HIV/AIDS on the communities in which you operate?	289	4%
7.19	Do you believe that your company's current policies and programs are sufficient to effectively manage the current and future impact of HIV/AIDS on your business and relevant communities?	935	12%
7.20	Has the current and future impact of HIV/AIDS on your country affected your country's access to foreign direct investment (FDI) in the past five years?	787	10%
7.21 a	What percentage of your employees would you estimate to be HIV positive? Note: missing responses: 2,809 = 678 (missing) + 2,131 ("Don't know")	2'809	36%
7.21 b	Is the prevalence estimate above based on the result of a quantitative study including company specific information (of those with non-missing responses to 7.21a)?	187	4%
7.22	In your company, what is the state of HIV/AIDS policy? Please check all boxes that apply. Note: Missing responses: 872 = 834 missing + 38 responses coded as 0's	872	11%
7.23	This is a five-part question. Each part asks the following: How severely is the HIV/AIDS epidemic currently affecting the following aspects of your business, and then specifies the aspect in question.		
7.23 a	– Death, disability and funeral expenses?	775	10%
7.23 b	– Medical expenses?	778	10%
7.23 c	– Productivity and absenteeism?	799	10%
7.23 d	– Recruitment and training expenses?	823	11%
7.23 e	– Revenue (due to economic impact of HIV/AIDS on the local market)?	906	12%
7.24	This is a multi-part question with enormous amount of specificity in the questions being asked. The question broadly asks the following: Does your company's HIV/AIDS policy and program address the following issues? It then proceeds to specify five main areas of HIV/AIDS policy and program, namely: <ul style="list-style-type: none"> • Prevention program elements (are affordable and accessible) • Target of prevention activities • Discrimination and disclosure policy • Care, support and treatment (affordable and accessible) • Coverage of care, support and treatment (who has access?) <p>Within each of these five areas, there are from three to five different issues addressed. The missing data and percentages reported below are calculated with reference to the firms that state that they have a written HIV/AIDS policy (in question 7.22 - options 2, 3 and/or 4)</p>		
7.24 a	Prevention program elements (are affordable and accessible)		
7.24 a-a	– Information about the risks of infection	64	14%
7.24 a-b	– Voluntary, confidential, anonymous HIV testing	79	18%
7.24 a-c	– Condoms	95	21%
7.24 b	Target of prevention activities		
7.24 b-a	– Target high-risk employee groups	111	25%
7.24 b-b	– Target employee partners and families	123	28%
7.24 b-c	– Target surrounding communities	132	30%
7.24 b-d	– Target high-risk community groups (eg. sex workers)	145	33%
7.24 b-e	– Target suppliers, contractors or customers	146	33%
7.24 c	Discrimination and disclosure policy		
7.24 c-a	– No required disclosure of HIV status for current and future employees	107	24%
7.24 c-b	– No discrimination in promotion, pay, or benefits based on HIV status	104	23%
7.24 c-c	– No discrimination in hiring based on HIV status	110	25%
7.24d	Care, support and treatment		
7.24d-a	– Diagnosis and treatment of STDs	115	26%
7.24d-b	– Anti-retrovirals for special situations (eg. mother to child transmissions, rape victims)	130	29%
7.24d-c	– Anti-retrovirals for all HIV+ employees	123	28%
7.24d-d	– Treatment for opportunistic infections	130	29%
7.24d-e	– Home based care for ill-health retirees	136	31%
7.24e	Coverage of care, support and treatment		
7.24e-a	– Some employees have access	193	44%
7.24e-b	– All employees have access	121	27%
7.24e-c	– Dependents of employees with coverage have access	155	35%

Table 5: What percentage of your employees would you estimate to be HIV positive?

Country	<1%	1 - 4%	5 - 9%	10 - 14%	15 - 19%	>20%	Don't know or no response
Algeria	56%	0%	0%	0%	0%	0%	44%
Angola	38	17	2	0	0	0	43
Argentina	59	5	3	0	0	0	33
Australia	94	0	0	0	0	0	6
Austria	58	4	0	0	0	0	39
Bangladesh	67	0	0	0	0	0	33
Belgium	80	0	0	0	0	0	20
Bolivia	51	3	1	0	0	6	39
Botswana	14	14	9	16	4	20	23
Brazil	71	5	3	0	0	0	21
Bulgaria	41	1	0	1	0	0	57
Cameroon	18	13	5	2	2	0	61
Canada	85	3	0	0	0	0	12
Chad	26	2	1	1	0	0	69
Chile	61	4	1	0	0	1	33
China	40	2	0	3	0	0	55
Colombia	63	2	0	0	0	0	35
Costa Rica	49	13	0	0	0	0	39
Croatia	82	1	0	0	0	0	17
Czech Republic	69	1	0	0	0	3	28
Denmark	88	7	0	0	0	0	5
Dominican Republic	46	3	0	0	6	0	46
Ecuador	55	7	1	0	1	2	34
Egypt	8	0	0	0	0	0	92
El Salvador	54	8	0	0	0	2	35
Estonia	80	0	0	0	0	0	20
Ethiopia	22	12	13	4	0	1	48
Finland	94	3	0	0	0	0	3
France	65	6	1	1	0	0	27
Gambia	22	6	0	0	0	0	72
Germany	75	4	0	0	0	0	21
Ghana	24	5	1	1	1	0	70
Greece	72	1	0	0	0	0	27
Guatemala	49	5	0	3	0	0	43
Haiti	24	16	12	4	0	0	44
Honduras	40	6	1	0	0	0	52
Hong Kong	63	0	2	0	0	0	35
Hungary	71	0	0	0	0	0	29
Iceland	89	0	0	0	0	0	11
India	62	8	0	0	0	0	30
Indonesia	55	0	11	16	5	0	13
Ireland	75	10	0	0	0	0	15
Israel	90	0	0	0	0	0	10
Italy	60	10	0	0	0	0	29
Jamaica	48	10	0	0	0	0	41
Japan	81	0	0	0	0	0	19%
Jordan	72	1	0	0	0	0	27
Kenya	17	16	21	9	0	0	36
Korea	83	0	3	0	1	0	13
Latvia	45	2	0	0	0	0	53
Lithuania	59	2	0	0	0	0	39
Luxembourg	71	0	0	0	0	3	26
Macedonia	63	1	0	0	0	0	36
Madagascar	57	3	0	0	0	0	40
Malawi	9	9	15	9	6	9	44
Malaysia	58	1	0	0	0	0	41
Mali	32	5	3	0	0	0	59
Malta	73	0	0	0	0	0	27
Mauritius	75	3	0	0	0	0	22
Mexico	62	9	1	1	1	0	27
Morocco	55	0	0	0	0	0	45
Mozambique	15	9	12	25	8	5	25
Namibia	15	23	15	15	2	13	17
Netherlands	85	7	0	0	0	0	8
New Zealand	91	1	0	0	0	0	7
Nicaragua	37	4	1	0	0	3	55
Nigeria	30	6	4	3	0	0	58
Norway	93	0	0	0	0	0	7

Country	<1%	1 - 4%	5 - 9%	10 - 14%	15 - 19%	>20%	Don't know or no response
Pakistan	65	2	0	0	0	0	33
Panama	47	5	1	1	0	1	44
Paraguay	42	2	0	0	0	2	55
Peru	68	4	0	0	0	0	28
Philippines	72	0	2	0	0	0	26
Poland	73	1	0	0	0	0	26
Portugal	83	0	2	0	0	0	15
Romania	34	0	0	0	0	0	66
Russian Federation	51	2	0	0	0	1	45
Rwanda	34	30	6	2	4	0	24
Senegal	30	7	0	0	0	0	63
Serbia	70	2	0	0	0	0	28
Singapore	73	3	0	0	0	0	24
Slovak Republic	73	0	0	0	0	0	27
Slovenia	86	2	0	0	0	0	11
South Africa	11	18	23	15	13	15	6
Spain	69	4	0	0	0	0	27
Sri Lanka	57	9	0	0	0	0	34
Sweden	96	0	0	0	0	0	4
Switzerland	79	10	0	0	0	0	11
Taiwan	81	2	0	0	0	0	16
Tanzania	14	20	14	10	4	4	32
Thailand	60	4	0	0	0	0	36%
Trinidad and Tobago	39	18	2	0	0	0	41
Tunisia	63	1	1	0	0	0	35
Turkey	70	0	0	0	0	0	30
Uganda	26	20	9	2	2	2	39
Ukraine	30	0	0	0	0	0	70
United Kingdom	75	8	0	2	0	0	15
United States	63	12	2	2	0	0	21
Uruguay	78	2	2	0	0	0	18
Venezuela	74	0	0	0	0	0	26
Vietnam	47	2	0	0	0	0	52
Zambia	8	14	10	12	10	10	36
Zimbabwe	0	9	3	6	30	42	9

Income group subtotal							
Low income	31	9	5	4	2	2	48
Lower middle income	50	3	1	1	0	1	45
Upper middle income	64	4	2	1	1	2	27
High income	77	4	0	0	0	0	19

UNAIDS HIV prevalence group subtotal							
Prevalence <1	63	3	0	0	0	0	33
Prevalence 1 - 4	39	5	1	1	0	0	54
Prevalence 5 - 9	27	15	8	3	1	1	45
Prevalence 10 - 14	16	11	9	15	5	3	40
Prevalence 15 - 19	15	14	19	9	2	3	39
Prevalence >20	11	16	13	13	11	18	19

Regional subtotal							
Africa	25	11	7	5	3	4	45
Asia	63	2	1	1	0	0	33
Central America & Caribbean	47	9	1	1	0	1	42
Europe	65	2	0	0	0	0	32
Middle East & North Africa	52	0	0	0	0	0	47
North America	76	6	1	1	0	0	16
Oceania	92	1	0	0	0	0	7
South America	61	4	1	0	0	1	33
Overall	54	5	2	1	1	1	36

Table 6: Is your HIV prevalence estimate based on the result of a quantitative study including company-specific information?

Country	Based on a study	Not based on a study	No Response	Country	Based on a study	Not based on a study	No Response
Algeria	11%	56%	32%	Pakistan	24	55	20
Angola	11	66	23	Panama	19	53	28
Argentina	16	62	21	Paraguay	5	65	31
Australia	11	83	6	Peru	22	62	16
Austria	4	61	35	Philippines	17	74	9
Bangladesh	11	67	22	Poland	13	63	24
Belgium	0	87	13	Portugal	11	76	13
Bolivia	1	77	22	Romania	23	60	17
Botswana	9	82	9	Russian Federation	15	69	16
Brazil	24	62	14	Rwanda	24	60	16
Bulgaria	11	57	31	Senegal	15	59	26
Cameroon	13	34	54	Serbia	10	77	13
Canada	8	81	11	Singapore	21	66	13
Chad	10	46	44	Slovak Republic	17	72	11
Chile	8	71	21	Slovenia	7	87	6
China	24	50	26	South Africa	35	63	2
Colombia	24	60	16	Spain	14	67	19
Costa Rica	6	64	30	Sri Lanka	14	71	15
Croatia	14	78	8	Sweden	0	100	0
Czech Republic	13	79	8	Switzerland	0	93	7
Denmark	2	95	2	Taiwan	21	63	16
Dominican Republic	14	57	29	Tanzania	20	55	25
Ecuador	21	67	11	Thailand	27	49	24
Egypt	3	10	88	Trinidad and Tobago	15	59	26
El Salvador	6	71	23	Tunisia	16	59	25
Estonia	18	72	9	Turkey	15	67	17
Ethiopia	11	53	36	Uganda	16	63	22
Finland	11	86	3	Ukraine	18	48	34
France	2	85	13	United Kingdom	8	88	5
Gambia	19	54	27	United States	4	83	13
Germany	6	83	11	Uruguay	9	75	15
Ghana	9	55	36	Venezuela	12	76	12
Greece	15	67	17	Vietnam	25	69	7
Guatemala	10	62	28	Zambia	12	64	24
Haiti	8	56	36	Zimbabwe	30	61	9
Honduras	11	48	41				
Hong Kong	5	80	15	Income group subtotal			
Hungary	6	83	11	Low income	16	56	28
Iceland	19	70	11	Lower middle income	14	61	25
India	11	79	10	Upper middle income	15	70	15
Indonesia	47	29	24	High income	8	80	12
Ireland	3	90	8				
Israel	5	90	5	UNAIDS HIV prevalence group subtotal			
Italy	8	73	19	Prevalence <1	13	70	18
Jamaica	5	78	17	Prevalence 1 - 4	14	56	30
Japan	17	72	11	Prevalence 5 - 9	17	54	29
Jordan	22	54	24	Prevalence 10 - 14	14	53	33
Kenya	25	45	29	Prevalence 15 - 19	19	50	31
Korea	28	57	15	Prevalence >20	20	68	11
Latvia	6	57	37				
Lithuania	18	76	6	Regional subtotal			
Luxembourg	3	76	21	Africa	16	57	28
Macedonia	16	63	21	Asia	20	65	15
Madagascar	5	66	29	Central America & Caribbean	12	60	28
Malawi	6	59	35	Europe	11	73	16
Malaysia	15	75	10	Middle East & North Africa	13	52	35
Mali	14	51	35	North America	6	82	12
Malta	10	81	9	Oceania	3	91	6
Mauritius	13	69	19	South America	14	68	18
Mexico	19	64	17				
Morocco	17	69	14	Overall	13	66	21
Mozambique	15	68	17				
Namibia	17	70	13				
Netherlands	6	90	4				
New Zealand	1	93	6				
Nicaragua	8	54	38				
Nigeria	21	42	37				
Norway	11	81	7				

Table 7: Comparison of firm and UNAIDS HIV prevalence estimates for firms both with and without company-specific studies

Panel 1: Overall				
HIV prevalence	Firm's self-reported prevalence		UNAIDS country estimate	
	Number	Percent	Number	Percent
< 1%	4'114	84.5%	3'747	77.0%
1 - 4%	371	7.6	422	8.7
5 - 9%	145	3.0	344	7.1
10 - 14%	104	2.1	78	1.6
15 - 19%	53	1.1	67	1.4
> 20%	79	1.6	208	4.3
Total	4'866	100.0	4'866	100.0

Panel 2: Firm estimate was based on a quantitative study including company specific information				
HIV prevalence	Firm's self-reported prevalence		UNAIDS country estimate	
	Number	Percent	Number	Percent
< 1%	745	83.8%	618	69.5%
1 - 4%	55	6.2	93	10.5
5 - 9%	33	3.7	91	10.2
10 - 14%	26	2.9	16	1.8
15 - 19%	14	1.6	21	2.4
> 20%	16	1.8	50	5.6
Total	889	100.0	889	100.0

Panel 3: Firm estimate was not based on a quantitative study				
HIV prevalence	Firm's self-reported prevalence		UNAIDS country estimate	
	Number	Percent	Number	Percent
< 1%	3'213	84.6%	3'000	79.0%
1 - 4%	311	8.2	307	8.1
5 - 9%	107	2.8	230	6.1
10 - 14%	71	1.9	60	1.6
15 - 19%	38	1.0	45	1.2
> 20%	58	1.5	156	4.1
Total	3'798	100.0	3'798	100.0

Notes:

- The total number of firms in Panel 1 does not equal 7,789 (the number of firms in the survey) because UNAIDS estimates were not available for 3 countries - Taiwan, Tunisia and Paraguay and 2,809 firms did not provide a self-report estimate of HIV prevalence among their employees (a response of "Don't Know" to question 7.21a or question 7.21a simply left blank).
- The total number of firms in Panel 2 and 3 does not add up to 4,866 (Panel 1 total) because 179 firms did not respond to question 7.21b (whether they were basing their estimate on a quantitative study or not).

Table 8: Comparison of firm and UNAIDS HIV prevalence estimates by region

HIV prevalence	Overall		Africa		Asia		Central America & Caribbean		Europe		Middle East & North Africa		North America		Oceania		South America	
	Firm self reported (FSR)	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS	FSR	UNAIDS
< 1%	84.5%	77.0%	45.2%	10.2%	93.8%	96.0%	80.3%	45.5%	95.7%	96.3%	99.5%	100.0%	90.7%	100.0%	98.8%	90.9%	100.0%	100.0%
1 - 4%	7.6	8.7	20.4	13.0	3.3	4.0	14.7	51.0	3.5	3.7	0.5	0.0	7.5	0.0	1.2	5.5	0.0	0.0
5 - 9%	3.0	7.1	12.9	37.1	1.2	0.0	2.0	3.5	0.2	0.0	0.0	0.0	0.9	0.0	0.0	1.8	0.0	0.0
10 - 14%	2.1	1.6	9.7	8.8	1.2	0.0	1.2	0.0	0.2	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
15 - 19%	1.1	1.4	5.1	7.5	0.4	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
> 20%	1.6	4.3	6.7	23.4	0.0	0.0	1.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 9: How serious do you consider the current and future impact of HIV/AIDS on your company?

Country	Expect serious impact	Expect some impact	Do not expect impact	No Response	Country	Expect serious impact	Expect some impact	Do not expect impact	No Response
Algeria	15%	38%	54%	8%	Norway	0	15	85	0
Angola	38	85	11	4	Pakistan	14	37	61	2
Argentina	3	36	62	2	Panama	20	43	57	0
Australia	0	17	83	0	Paraguay	15	52	48	0
Austria	0	11	78	11	Peru	11	44	52	4
Bangladesh	8	47	51	1	Philippines	6	57	43	0
Belgium	0	7	93	0	Poland	3	48	50	2
Bolivia	15	41	57	3	Portugal	4	33	67	0
Botswana	77	96	4	0	Romania	15	36	61	2
Brazil	6	46	54	0	Russian Federation	16	44	53	3
Bulgaria	9	28	65	7	Rwanda	54	78	18	4
Cameroon	71	96	2	2	Senegal	41	67	26	7
Canada	4	45	53	1	Serbia	6	32	66	2
Chad	86	98	2	0	Singapore	1	23	76	2
Chile	2	23	75	2	Slovak Republic	4	24	70	6
China	25	56	42	2	Slovenia	2	15	85	0
Colombia	11	38	59	3	South Africa	79	100	0	0
Costa Rica	6	34	66	0	Spain	3	23	76	1
Croatia	11	32	68	0	Sri Lanka	8	52	47	1
Czech Republic	6	20	77	3	Sweden	0	21	79	0
Denmark	2	10	90	0	Switzerland	3	30	70	0
Dominican Republic	14	54	46	0	Taiwan	5	40	60	0
Ecuador	8	44	55	1	Tanzania	74	94	4	1
Egypt	15	33	57	11	Thailand	27	89	9	2
El Salvador	8	40	60	0	Trinidad and Tobago	48	77	23	0
Estonia	8	38	58	3	Tunisia	15	31	64	5
Ethiopia	72	95	5	0	Turkey	7	28	72	0
Finland	3	8	92	0	Uganda	63	94	6	0
France	3	29	70	1	Ukraine	22	66	34	0
Gambia	42	87	11	1	United Kingdom	5	37	60	3
Germany	1	13	88	0	United States	15	56	38	6
Ghana	55	89	9	2	Uruguay	2	25	74	2
Greece	5	27	71	2	Venezuela	3	38	59	3
Guatemala	8	44	54	2	Vietnam	74	93	6	1
Haiti	60	88	12	0	Zambia	80	97	3	0
Honduras	28	60	39	1	Zimbabwe	94	100	0	0
Hong Kong	5	33	67	0					
Hungary	2	12	88	0	Income group subtotal				
Iceland	0	11	89	0	Low income	53	82	16	2
India	22	60	37	3	Lower middle income	15	42	55	3
Indonesia	13	84	16	0	Upper middle income	12	37	62	1
Ireland	8	23	78	0	High income	3	25	73	1
Israel	0	19	81	0					
Italy	0	31	69	0	UNAIDS HIV prevalence group subtotal				
Jamaica	53	83	17	0	Prevalence <1	10	35	63	2
Japan	14	39	61	0	Prevalence 1 - 4	39	72	26	1
Jordan	5	15	81	4	Prevalence 5 - 9	57	87	12	2
Kenya	63	96	3	1	Prevalence 10 - 14	72	93	6	1
Korea	3	30	69	1	Prevalence 15 - 19	67	94	4	2
Latvia	4	28	66	6	Prevalence >20	79	98	2	0
Lithuania	6	36	63	1					
Luxembourg	3	9	88	3	Regional subtotal				
Macedonia	8	26	73	1	Africa	60	89	10	1
Madagascar	35	78	22	0	Asia	17	49	50	1
Malawi	76	91	6	3	Central America & Caribbean	22	52	47	1
Malaysia	4	25	74	1	Europe	6	28	69	2
Mali	54	84	11	5	Middle East & North Africa	15	33	62	6
Malta	3	24	76	0	North America	9	50	47	3
Mauritius	3	38	63	0	Oceania	0	20	80	0
Mexico	6	38	60	2	South America	7	37	61	2
Morocco	30	50	46	4					
Mozambique	72	91	9	0	Overall	21	47	51	2
Namibia	68	100	0	0					
Netherlands	1	29	71	0					
New Zealand	0	21	79	0					
Nicaragua	23	45	52	3					
Nigeria	46	77	20	3					

Table 11: How serious do you consider the current and future impact of tuberculosis on your company?

Country	Expect serious impact	Expect some impact	Do not expect impact	No Response
Algeria	8%	31%	59%	10%
Angola	40	87	11	2
Argentina	2	10	87	3
Australia	0	0	100	0
Austria	1	5	84	11
Bangladesh	13	51	42	7
Belgium	0	0	100	0
Bolivia	14	32	66	3
Botswana	32	80	20	0
Brazil	3	13	87	0
Bulgaria	7	26	68	6
Cameroon	55	89	9	2
Canada	1	8	91	1
Chad	61	90	10	0
Chile	1	6	92	2
China	18	60	38	2
Colombia	8	13	84	3
Costa Rica	4	6	94	0
Croatia	9	19	81	0
Czech Republic	4	12	85	3
Denmark	0	0	100	0
Dominican Republic	3	14	86	0
Ecuador	7	30	69	1
Egypt	16	37	52	12
El Salvador	4	21	79	0
Estonia	3	29	68	3
Ethiopia	52	82	14	4
Finland	3	3	97	0
France	2	6	92	1
Gambia	41	90	9	1
Germany	0	0	100	0
Ghana	29	80	20	0
Greece	2	7	90	3
Guatemala	5	25	75	0
Haiti	36	88	12	0
Honduras	6	30	68	1
Hong Kong	0	23	77	0
Hungary	3	8	92	0
Iceland	0	0	100	0
India	11	41	56	3
Indonesia	13	79	21	0
Ireland	3	10	90	0
Israel	0	0	95	5
Italy	0	10	90	0
Jamaica	7	22	78	0
Japan	4	21	79	0
Jordan	4	14	82	4
Kenya	31	84	16	0
Korea	3	12	85	3
Latvia	5	28	67	5
Lithuania	5	36	63	1
Luxembourg	0	9	91	0
Macedonia	4	14	85	1
Madagascar	30	73	27	0
Malawi	50	91	6	3
Malaysia	2	13	86	1
Mali	32	68	27	5
Malta	0	5	95	0
Mauritius	0	16	84	0
Mexico	2	10	88	2
Morocco	24	44	52	4
Mozambique	41	85	15	0
Namibia	23	89	9	2
Netherlands	1	6	94	0
New Zealand	0	9	91	0
Nicaragua	21	41	58	1
Nigeria	29	70	29	2

Country	Expect serious impact	Expect some impact	Do not expect impact	No Response
Norway	0	7	93	0
Pakistan	16	51	47	2
Panama	12	24	76	0
Paraguay	11	31	66	3
Peru	9	39	58	3
Philippines	19	66	34	0
Poland	2	30	66	3
Portugal	0	13	87	0
Romania	14	34	64	2
Russian Federation	13	48	48	4
Rwanda	12	70	26	4
Senegal	44	67	26	7
Serbia	7	27	71	2
Singapore	1	7	92	2
Slovak Republic	7	23	72	6
Slovenia	1	5	95	0
South Africa	48	82	18	0
Spain	3	4	94	1
Sri Lanka	2	43	55	2
Sweden	0	0	100	0
Switzerland	0	4	96	0
Taiwan	7	23	77	0
Tanzania	49	83	14	3
Thailand	2	33	60	7
Trinidad and Tobago	7	30	69	2
Tunisia	11	24	72	4
Turkey	2	17	83	0
Uganda	43	89	11	1
Ukraine	25	75	24	1
United Kingdom	3	15	82	3
United States	0	17	79	4
Uruguay	3	3	95	2
Venezuela	3	18	79	3
Vietnam	30	83	17	0
Zambia	66	93	7	0
Zimbabwe	73	94	6	0

Income group subtotal				
Low income	35	77	22	2
Lower middle income	9	33	63	3
Upper middle income	6	19	79	2
High income	1	8	91	1

UNAIDS HIV prevalence group subtotal				
Prevalence <1	7	24	74	2
Prevalence 1 - 4	21	53	46	1
Prevalence 5 - 9	37	79	19	2
Prevalence 10 - 14	47	87	12	1
Prevalence 15 - 19	37	86	13	1
Prevalence >20	47	87	12	0

Regional subtotal				
Africa	39	81	18	1
Asia	10	39	59	2
Central America & Caribbean	8	25	75	1
Europe	5	20	78	2
Middle East & North Africa	12	28	66	6
North America	1	12	86	2
Oceania	0	7	93	0
South America	6	19	79	2

Overall	13	36	62	2
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Table 12: Overlap of concern for HIV/AIDS, malaria and TB

Region	Serious impact of HIV/AIDS, malaria or TB (1)	Serious impact of HIV/AIDS, malaria and TB (2)	No problem with HIV/AIDS, malaria and TB (3)
Africa	71.9%	29.1%	4.9%
Asia	20.7	4.6	43.0
Central American & Caribbean	24.2	5.5	43.6
Europe	8.2	1.6	64.2
Middle East & North Africa	16.9	8.2	57.1
North America	8.7	0.8	47.2
Oceania	0.0	0.0	78.4
South America	9.5	2.7	57.5
Overall	25.3	8.6	45.7

Notes:

- (1) These percentages represent the proportion of all surveyed firms, overall or in the region, that claimed that at least one of the infectious diseases listed - malaria, TB, and HIV/AIDS - will have, or currently have, a serious impact on their company. "Serious impact" is measured by a response of 1 or 2 to either question 7.17a or 7.17b or 7.17c of the GCR survey.
- (2) These percentages represent the proportion of all surveyed firms, overall or in the region, that claimed that all three infectious diseases - malaria, TB and HIV/AIDS - will have, or currently have, a serious impact on their company. "Serious impact" is measured by a response of 1 or 2 to all three questions 7.17a, 7.17b and 7.17c of the GCR survey.
- (3) These percentages represent the proportion of all surveyed firms, overall or in the region, that claimed that all three infectious diseases - malaria, TB and HIV/AIDS - pose no problem, current or future, on their company. "No problem" is measured by a response of 7 or 6 to all three questions 7.17a, 7.17b and 7.17c of the GCR survey.

Table 13: Link between business perceptions of HIV/AIDS and TB

Region	Percent of firms that are seriously concerned about impact of TB on the firm and perceive the impact of HIV/AIDS on the firm as:		Percent of firms that are seriously concerned about impact of HIV/AIDS on the firm and perceive the impact of TB on the firm as:	
	Very serious (1)	Not a problem (2)	Very serious (3)	Not a problem (4)
Africa	91.5%	0.8%	21.1%	43.5%
Asia	74.3	2.8	5.1	74.5
Central American & Caribbean	82.5	3.5	11.8	61.0
Europe	67.4	9.7	1.3	83.4
Middle East & North Africa	84.8	0.0	2.1	87.9
North America	100.0	0.0	2.8	55.1
Oceania	n/a	n/a	0.0	84.2
South America	71.1	2.2	1.8	74.2
Overall	84.7	2.4	4.3	75.9

Notes:

- (1) The proportion of firms, overall and by region, that perceive TB as having a very serious current or future impact on their business (responses of 1 or 2 to question 7.17b), that are also very concerned about the impact of HIV/AIDS on their business (responses of 1 or 2 to question 7.17c).
- (2) The proportion of firms, overall and by region, that perceive TB as having a very serious current or future impact on their business (responses of 1 or 2 to question 7.17b), that are unconcerned about the impact of HIV/AIDS on their business (responses of 6 or 7 to question 7.17c).
- (3) The proportion of firms, overall and by region, that perceive TB as not having a current or future impact on their business (responses of 6 or 7 to question 7.17b), that are very concerned about the impact of HIV/AIDS on their business (responses of 1 or 2 to question 7.17c).
- (4) The proportion of firms, overall and by region, that perceive TB as not having a current or future impact on their business (responses of 6 or 7 to question 7.17b), that are also unconcerned about the impact of HIV/AIDS on their business (responses of 6 or 7 to question 7.17c).

Table 15: How severely is the HIV/AIDS epidemic currently affecting the following aspects of your business: medical expenses?

Country	Serious impact	Some impact	Minimal impact	No Response
Algeria	0%	7%	75%	18%
Angola	15	32	57	11
Argentina	3	10	80	10
Australia	0	0	94	6
Austria	0	0	65	35
Bangladesh	1	5	89	5
Belgium	0	0	100	0
Bolivia	8	23	73	4
Botswana	21	57	41	2
Brazil	3	13	79	8
Bulgaria	2	5	81	14
Cameroon	30	59	29	13
Canada	0	4	91	5
Chad	30	63	20	17
Chile	1	5	88	6
China	20	43	46	11
Colombia	6	14	73	13
Costa Rica	0	11	79	10
Croatia	2	5	91	5
Czech Republic	7	12	79	9
Denmark	0	2	93	5
Dominican Republic	0	17	74	9
Ecuador	6	13	83	4
Egypt	0	1	9	90
El Salvador	0	4	88	8
Estonia	3	9	85	6
Ethiopia	19	49	35	15
Finland	0	3	97	0
France	0	5	91	3
Gambia	6	22	68	10
Germany	0	0	94	6
Ghana	14	31	59	10
Greece	1	7	80	13
Guatemala	7	13	80	7
Haiti	4	40	52	8
Honduras	10	24	63	12
Hong Kong	0	5	93	2
Hungary	0	1	94	5
Iceland	4	4	96	0
India	5	8	84	8
Indonesia	5	71	21	8
Ireland	0	0	93	8
Israel	0	0	90	10
Italy	0	6	75	19
Jamaica	0	7	86	7
Japan	0	3	92	6
Jordan	1	2	80	18
Kenya	13	57	36	7
Korea	7	26	67	7
Latvia	0	2	89	9
Lithuania	0	11	87	1
Luxembourg	0	0	94	6
Macedonia	4	6	52	42
Madagascar	6	15	72	13
Malawi	29	79	15	6
Malaysia	1	3	97	0
Mali	8	27	54	19
Malta	0	1	86	13
Mauritius	0	6	84	9
Mexico	2	10	83	8
Morocco	12	31	57	12
Mozambique	16	59	35	7
Namibia	23	79	17	4
Netherlands	0	2	95	2
New Zealand	0	1	99	0
Nicaragua	8	11	68	21
Nigeria	6	17	72	11

Country	Serious impact	Some impact	Minimal impact	No Response
Norway	0	4	93	4
Pakistan	2	8	90	2
Panama	15	23	69	8
Paraguay	3	9	77	14
Peru	4	8	82	10
Philippines	2	4	94	2
Poland	7	33	57	11
Portugal	0	0	100	0
Romania	8	16	74	10
Russian Federation	5	18	72	10
Rwanda	20	44	42	14
Senegal	11	33	48	19
Serbia	3	19	70	11
Singapore	1	3	93	3
Slovak Republic	1	8	83	8
Slovenia	1	8	89	3
South Africa	23	66	34	0
Spain	0	4	90	6
Sri Lanka	5	9	84	7
Sweden	0	4	89	7
Switzerland	0	0	96	4
Taiwan	7	21	70	9
Tanzania	16	62	32	6
Thailand	2	20	64	16
Trinidad and Tobago	2	11	82	7
Tunisia	5	13	63	24
Turkey	7	7	89	4
Uganda	35	63	30	7
Ukraine	10	21	76	3
United Kingdom	3	9	83	8
United States	0	21	71	8
Uruguay	0	2	95	3
Venezuela	0	9	88	3
Vietnam	8	45	49	6
Zambia	42	88	12	0
Zimbabwe	39	91	9	0

Income group subtotal				
Low income	15	39	51	9
Lower middle income	5	14	71	15
Upper middle income	5	14	79	6
High income	1	4	89	7

UNAIDS HIV prevalence group subtotal				
Prevalence <1	3	10	79	10
Prevalence 1 - 4	10	24	66	10
Prevalence 5 - 9	17	42	48	10
Prevalence 10 - 14	22	59	32	9
Prevalence 15 - 19	18	64	29	6
Prevalence >20	29	75	24	1

Regional subtotal				
Africa	18	46	45	9
Asia	5	18	76	6
Central America & Caribbean	5	14	76	10
Europe	2	8	82	10
Middle East & North Africa	4	10	59	31
North America	0	11	83	6
Oceania	0	1	98	1
South America	3	10	82	7

Overall	6	18	72	10
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Table 17: How severely is the HIV/AIDS epidemic currently affecting the following aspects of your business: recruitment and training expenses?

Country	Serious impact	Some impact	Minimal impact	No Response
Algeria	0%	17%	66%	17%
Angola	6	38	47	15
Argentina	2	5	85	10
Australia	0	6	83	11
Austria	0	1	64	35
Bangladesh	4	8	88	4
Belgium	0	0	98	2
Bolivia	9	22	75	4
Botswana	14	55	43	2
Brazil	2	8	83	10
Bulgaria	2	7	79	14
Cameroon	25	61	23	16
Canada	0	5	89	5
Chad	19	50	30	20
Chile	1	5	88	7
China	15	41	47	12
Colombia	2	19	68	13
Costa Rica	4	16	74	10
Croatia	2	5	90	5
Czech Republic	5	11	79	10
Denmark	0	2	90	7
Dominican Republic	6	14	80	6
Ecuador	6	13	83	4
Egypt	0	1	9	90
El Salvador	0	2	90	8
Estonia	0	12	83	5
Ethiopia	8	40	39	21
Finland	0	3	97	0
France	2	10	87	3
Gambia	6	28	62	10
Germany	0	0	94	6
Ghana	11	34	56	10
Greece	2	8	82	10
Guatemala	7	11	80	8
Haiti	8	28	56	16
Honduras	7	24	62	13
Hong Kong	0	3	97	0
Hungary	0	1	94	5
Iceland	4	4	96	0
India	5	10	84	6
Indonesia	5	66	21	13
Ireland	0	3	88	10
Israel	0	10	81	10
Italy	0	2	75	23
Jamaica	0	14	79	7
Japan	0	10	83	7
Jordan	2	4	79	18
Kenya	8	48	43	9
Korea	5	25	67	8
Latvia	0	4	86	10
Lithuania	2	15	84	1
Luxembourg	0	0	94	6
Macedonia	3	8	54	39
Madagascar	5	18	68	14
Malawi	15	76	18	6
Malaysia	0	2	98	0
Mali	5	30	49	22
Malta	1	4	85	12
Mauritius	0	9	81	9
Mexico	1	7	86	8
Morocco	14	37	53	10
Mozambique	12	57	35	8
Namibia	17	74	21	4
Netherlands	0	1	96	2
New Zealand	0	1	99	0
Nicaragua	4	10	68	23
Nigeria	4	21	66	13

Country	Serious impact	Some impact	Minimal impact	No Response
Norway	0	4	85	11
Pakistan	2	12	86	2
Panama	12	20	72	8
Paraguay	6	11	75	14
Peru	4	8	82	10
Philippines	2	9	89	2
Poland	3	33	58	10
Portugal	0	4	96	0
Romania	6	14	75	11
Russian Federation	5	18	72	10
Rwanda	8	32	52	16
Senegal	4	37	44	19
Serbia	4	20	69	11
Singapore	1	4	92	4
Slovak Republic	0	8	83	8
Slovenia	2	8	89	3
South Africa	11	66	34	0
Spain	0	4	90	6
Sri Lanka	7	16	76	8
Sweden	0	0	93	7
Switzerland	0	1	95	4
Taiwan	7	19	74	7
Tanzania	7	55	36	9
Thailand	0	13	73	13
Trinidad and Tobago	2	7	84	10
Tunisia	5	13	60	27
Turkey	0	7	83	11
Uganda	23	60	31	9
Ukraine	3	19	76	4
United Kingdom	2	14	80	6
United States	0	17	73	10
Uruguay	0	5	92	3
Venezuela	0	9	88	3
Vietnam	10	47	47	6
Zambia	25	73	25	2
Zimbabwe	15	88	12	0

Income group subtotal				
Low income	10	38	51	11
Lower middle income	5	15	70	15
Upper middle income	3	13	80	7
High income	1	5	88	7

UNAIDS HIV prevalence group subtotal				
Prevalence <1	3	11	78	11
Prevalence 1 - 4	7	24	66	11
Prevalence 5 - 9	10	39	48	13
Prevalence 10 - 14	18	59	30	11
Prevalence 15 - 19	10	57	35	8
Prevalence >20	17	70	29	2

Regional subtotal				
Africa	12	44	45	11
Asia	5	19	75	6
Central America & Caribbean	4	13	76	11
Europe	2	9	81	10
Middle East & North Africa	4	14	55	31
North America	0	10	83	7
Oceania	0	2	95	2
South America	3	10	82	8

Overall	5	19	71	11
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Table 19: Has the current and future impact of HIV/AIDS on your country affected your country's access to foreign direct investment (FDI) in the past five years?

Country	Serious impact	Some impact	Minimal impact	No Response
Algeria	4%	14%	76%	10%
Angola	6	36	53	11
Argentina	0	15	80	5
Australia	0	0	94	6
Austria	0	4	59	37
Bangladesh	0	14	79	7
Belgium	0	4	91	4
Bolivia	1	23	71	6
Botswana	11	61	21	18
Brazil	2	10	87	3
Bulgaria	2	13	73	14
Cameroon	5	50	32	18
Canada	0	7	88	5
Chad	17	63	26	11
Chile	0	4	94	2
China	13	61	37	2
Colombia	0	13	75	13
Costa Rica	1	20	76	4
Croatia	0	10	82	8
Czech Republic	1	7	90	3
Denmark	0	0	93	7
Dominican Republic	0	17	77	6
Ecuador	3	30	67	3
Egypt	1	2	11	88
El Salvador	0	21	75	4
Estonia	0	18	78	3
Ethiopia	12	52	27	21
Finland	0	3	97	0
France	0	6	89	4
Gambia	4	27	63	10
Germany	0	3	90	7
Ghana	6	48	41	11
Greece	0	5	87	8
Guatemala	2	34	59	7
Haiti	36	72	24	4
Honduras	9	55	32	13
Hong Kong	0	5	90	5
Hungary	0	8	83	8
Iceland	0	0	100	0
India	0	16	75	10
Indonesia	5	74	16	11
Ireland	0	3	88	10
Israel	0	10	81	10
Italy	0	10	77	13
Jamaica	2	29	66	5
Japan	1	17	71	13
Jordan	0	6	80	14
Kenya	7	63	23	15
Korea	1	30	68	2
Latvia	3	13	42	45
Lithuania	3	36	58	6
Luxembourg	0	0	94	6
Macedonia	5	12	75	13
Madagascar	3	29	60	11
Malawi	3	53	32	15
Malaysia	0	2	97	1
Mali	3	38	51	11
Malta	0	1	90	9
Mauritius	0	9	84	6
Mexico	0	11	86	3
Morocco	3	30	62	8
Mozambique	4	67	17	16
Namibia	13	62	21	17
Netherlands	0	5	93	2
New Zealand	0	4	91	4
Nicaragua	1	25	69	6
Nigeria	2	43	46	10

Country	Serious impact	Some impact	Minimal impact	No Response
Norway	0	0	89	11
Pakistan	4	14	84	2
Panama	0	31	67	3
Paraguay	3	14	82	5
Peru	3	14	81	5
Philippines	0	21	79	0
Poland	0	35	53	12
Portugal	2	7	93	0
Romania	14	46	47	7
Russian Federation	3	31	58	11
Rwanda	8	34	60	6
Senegal	0	26	74	0
Serbia	5	16	78	6
Singapore	0	6	92	3
Slovak Republic	1	11	83	6
Slovenia	0	6	92	2
South Africa	19	69	26	5
Spain	0	3	90	7
Sri Lanka	2	31	56	13
Sweden	0	0	96	4
Switzerland	0	3	90	7
Taiwan	2	23	77	0
Tanzania	4	54	19	28
Thailand	0	27	71	2
Trinidad and Tobago	0	28	64	8
Tunisia	0	9	75	16
Turkey	0	9	85	7
Uganda	14	59	34	7
Ukraine	3	43	49	7
United Kingdom	2	6	89	5
United States	0	8	83	10
Uruguay	0	3	94	3
Venezuela	3	18	74	9
Vietnam	3	63	35	3
Zambia	7	56	22	22
Zimbabwe	12	58	30	12

Income group subtotal				
Low income	6	46	43	11
Lower middle income	3	25	61	15
Upper middle income	1	17	78	5
High income	0	6	87	7

UNAIDS HIV prevalence group subtotal				
Prevalence <1	2	16	74	10
Prevalence 1 - 4	4	38	54	8
Prevalence 5 - 9	9	49	38	12
Prevalence 10 - 14	5	60	24	17
Prevalence 15 - 19	6	60	26	15
Prevalence >20	12	61	24	15

Regional subtotal				
Africa	7	49	38	13
Asia	2	28	68	5
Central America & Caribbean	3	29	65	6
Europe	2	14	75	11
Middle East & North Africa	1	12	61	27
North America	0	7	86	7
Oceania	0	3	92	5
South America	1	14	82	5

Overall	3	24	66	10
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Table 20: Current impact of HIV/AIDS on specific aspects of firms' business by region

Region	Severe impact via death, disability, and funeral expense (1)	Severe impact via medical expenses (2)	Severe impact via productivity and absenteeism (3)	Severe impact via recruitment and training expenses (4)	Severe impact via loss of revenues (5)
Africa	24.2%	25.5%	25.7%	15.8%	16.3%
Asia	11.5	14.1	17.3	14.1	13.6
Central American & Caribbean	8.5	10.5	10.5	9.8	9.2
Europe	12.4	15.7	15.7	15.7	12.4
Middle East & North Africa	14.7	17.3	21.3	16.0	12.0
North America	0.0	0.0	9.1	0.0	0.0
Oceania (6)	n/a	n/a	n/a	n/a	n/a
South America	17.5	19.3	22.8	21.1	22.8
Overall	19.1	21.0	21.8	15.1	14.8

Notes:

- These percentages are calculated as the proportion of all surveyed firms, overall or in the region, that responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm), that also responded with a 1 or 2 to question 7.23a (death, disability and funeral expenses have a significant negative impact on their business).
- These percentages are calculated as the proportion of all surveyed firms, overall or in the region, that responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm), that also responded with a 1 or 2 to question 7.23b (medical expenses have a significant negative impact on their business).
- These percentages are calculated as the proportion of all surveyed firms, overall or in the region, that responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm), that also responded with a 1 or 2 to question 7.23c (productivity and absenteeism have a significant negative impact on their business).
- These percentages are calculated as the proportion of all surveyed firms, overall or in the region, that responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm), that also responded with a 1 or 2 to question 7.23d (recruitment and training expenses have a significant negative impact on their business).
- These percentages are calculated as the proportion of all surveyed firms, overall or in the region, that responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm), that also responded with a 1 or 2 to question 7.23e (revenue loss has a significant negative impact on their business).
- There are no statistics reported for Oceania because none of the firms in that region responded with a 1 or 2 to question 7.17c (expecting a serious current or future impact of HIV/AIDS on their firm).

Table 21: How serious do you consider the current and future impact of HIV/AIDS on your community?

Country	Serious impact	Some impact	Minimal impact	No Response
Algeria	14%	30%	59%	11%
Angola	40	83	11	6
Argentina	3	52	48	0
Australia	0	28	72	0
Austria	0	4	77	19
Bangladesh	8	36	63	1
Belgium	0	17	83	0
Bolivia	13	52	44	4
Botswana	79	98	2	0
Brazil	5	41	56	3
Bulgaria	6	32	59	8
Cameroon	75	88	5	7
Canada	4	35	64	1
Chad	85	99	1	0
Chile	3	31	66	2
China	24	61	35	4
Colombia	10	37	59	5
Costa Rica	9	50	50	0
Croatia	14	35	63	2
Czech Republic	3	15	81	5
Denmark	2	19	81	0
Dominican Republic	11	69	26	6
Ecuador	14	47	52	1
Egypt	2	6	10	85
El Salvador	13	60	40	0
Estonia	20	75	22	3
Ethiopia	65	92	8	0
Finland	0	11	89	0
France	2	30	69	1
Gambia	34	80	15	5
Germany	0	11	89	0
Ghana	38	87	11	2
Greece	3	22	73	4
Guatemala	11	57	41	2
Haiti	40	92	8	0
Honduras	33	77	22	1
Hong Kong	2	38	62	0
Hungary	6	23	75	3
Iceland	0	7	93	0
India	21	71	25	3
Indonesia	8	89	8	3
Ireland	3	30	65	5
Israel	0	0	100	0
Italy	2	33	67	0
Jamaica	50	91	9	0
Japan	11	39	61	0
Jordan	7	24	74	2
Kenya	68	99	1	0
Korea	4	31	67	2
Latvia	4	29	63	8
Lithuania	10	56	43	1
Luxembourg	0	12	88	0
Macedonia	11	30	68	3
Madagascar	27	80	17	3
Malawi	79	94	3	3
Malaysia	5	26	73	1
Mali	41	84	11	5
Malta	3	22	74	4
Mauritius	6	34	66	0
Mexico	9	38	60	2
Morocco	24	50	44	6
Mozambique	68	91	8	1
Namibia	72	100	0	0
Netherlands	1	25	74	1
New Zealand	0	24	76	0
Nicaragua	18	42	56	1
Nigeria	49	84	13	3

Country	Serious impact	Some impact	Minimal impact	No Response
Norway	4	7	89	4
Pakistan	16	35	63	2
Panama	16	57	43	0
Paraguay	12	62	38	0
Peru	14	47	51	3
Philippines	4	49	51	0
Poland	2	47	51	2
Portugal	0	39	61	0
Romania	21	40	58	2
Russian Federation	17	52	44	4
Rwanda	40	72	24	4
Senegal	26	67	26	7
Serbia	9	46	53	1
Singapore	3	28	69	3
Slovak Republic	3	25	69	6
Slovenia	2	13	85	2
South Africa	74	100	0	0
Spain	3	20	77	3
Sri Lanka	13	51	48	1
Sweden	0	18	82	0
Switzerland	0	23	74	3
Taiwan	2	33	67	0
Tanzania	70	94	4	1
Thailand	22	67	31	2
Trinidad and Tobago	43	87	13	0
Tunisia	8	33	61	5
Turkey	4	28	72	0
Uganda	51	92	8	0
Ukraine	25	70	28	1
United Kingdom	12	48	51	2
United States	13	56	37	8
Uruguay	0	17	82	2
Venezuela	9	47	50	3
Vietnam	45	86	13	1
Zambia	75	100	0	0
Zimbabwe	91	100	0	0

Income group subtotal				
Low income	46	82	16	2
Lower middle income	15	46	47	7
Upper middle income	13	41	57	2
High income	3	25	72	3

UNAIDS HIV prevalence group subtotal				
Prevalence <1	9	37	59	4
Prevalence 1 - 4	35	79	20	2
Prevalence 5 - 9	52	87	11	2
Prevalence 10 - 14	71	89	7	4
Prevalence 15 - 19	72	97	2	1
Prevalence >20	77	100	0	0

Regional subtotal				
Africa	55	88	10	2
Asia	14	48	50	2
Central America & Caribbean	22	62	37	1
Europe	7	32	64	4
Middle East & North Africa	10	27	51	21
North America	8	43	53	4
Oceania	0	25	75	0
South America	8	42	56	2

Overall	20	50	47	4
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Table 22: Current impact of HIV/AIDS on business and community by region

Region	Very serious for both firm and community (1)	Not a problem for both firm and community (2)	Very serious for firm and no problem for community (3)	No problem for firm and very serious for community (4)
Africa	48.4%	4.9%	2.5%	1.9%
Asia	11.1	42.4	1.4	0.5
Central American & Caribbean	15.9	31.0	1.3	1.8
Europe	4.0	59.4	0.8	1.7
Middle East & North Africa	10.5	58.8	0.8	1.3
North America	3.3	40.5	0.8	0.8
Oceania	0.0	67.0	0.0	0.0
South America	5.2	48.8	0.7	1.2
Overall	15.9	41.4	1.3	1.5

Notes:

- (1) These percentages are calculated based on responses of 1 or 2 to both questions 7.17c and 7.18, with missing responses to questions 7.17c or 7.18 excluded in the denominator.
- (2) These percentages are calculated based on responses of 6 or 7 to both questions 7.17c and 7.18, with missing responses to questions 7.17c or 7.18 excluded in the denominator.
- (3) These percentages are calculated based on responses of 1 or 2 to question 7.17c and responses of 6 or 7 to question 7.18, with missing responses to questions 7.17c or 7.18 excluded in the denominator.
- (4) These percentages are calculated based on responses of 6 or 7 to question 7.17c and responses of 1 or 2 to question 7.18, with missing responses to questions 7.17c or 7.18 excluded in the denominator.

Table 23: In your company, what is the state of your AIDS policy?

Country	No written policy	Written policy	Board approved	Union approved	Committee approved	No response
Algeria	82%	0%	0%	0%	0%	18%
Angola	81	6	2	0	4	13
Argentina	92	2	2	0	0	7
Australia	89	0	0	0	0	11
Austria	63	1	0	0	1	36
Bangladesh	89	1	1	0	0	9
Belgium	96	2	0	0	2	2
Bolivia	92	1	1	0	0	6
Botswana	54	30	21	0	9	16
Brazil	67	24	13	5	11	10
Bulgaria	91	1	0	0	1	8
Cameroon	66	11	2	0	9	23
Canada	87	7	0	1	5	7
Chad	86	4	4	0	0	11
Chile	93	2	1	0	2	5
China	82	6	0	5	1	12
Colombia	86	8	3	0	6	6
Costa Rica	91	3	1	0	1	6
Croatia	93	4	3	1	0	4
Czech Republic	94	1	1	0	0	5
Denmark	76	17	14	2	0	7
Dominican Republic	89	3	0	0	3	9
Ecuador	92	3	2	0	1	5
Egypt	11	0	0	0	0	89
El Salvador	92	6	4	0	2	2
Estonia	89	2	2	0	0	9
Ethiopia	84	6	1	0	5	11
Finland	86	8	3	6	0	6
France	92	1	0	1	0	6
Gambia	67	15	4	0	11	18
Germany	88	3	1	0	1	10
Ghana	75	5	2	2	1	20
Greece	89	2	0	0	2	9
Guatemala	98	0	0	0	0	2
Haiti	84	0	0	0	0	16
Honduras	91	2	1	0	1	6
Hong Kong	88	5	3	0	2	7
Hungary	95	0	0	0	0	5
Iceland	85	0	0	0	0	15
India	83	11	5	2	8	6
Indonesia	50	39	26	11	3	11
Ireland	83	8	8	0	0	10
Israel	86	5	0	0	5	10
Italy	73	6	4	2	0	21
Jamaica	86	9	7	0	2	5
Japan	86	3	1	0	1	11
Jordan	78	5	1	0	4	18
Kenya	75	12	7	0	5	13
Korea	77	10	6	1	3	14
Latvia	80	4	3	1	2	16
Lithuania	96	1	0	0	1	3
Luxembourg	97	0	0	0	0	3
Macedonia	85	3	1	1	1	12
Madagascar	91	5	2	1	2	3
Malawi	74	15	12	0	3	12
Malaysia	86	6	6	0	0	7
Mali	84	0	0	0	0	16
Malta	88	1	0	0	1	10
Mauritius	81	6	3	0	3	13
Mexico	91	3	3	0	0	6
Morocco	84	5	3	1	1	11
Mozambique	75	11	5	3	3	15
Namibia	53	21	21	0	0	26
Netherlands	90	2	2	0	0	7
New Zealand	97	0	0	0	0	3
Nicaragua	80	1	1	0	0	18
Nigeria	76	9	6	1	3	15

Country	No written policy	Written policy	Board approved	Union approved	Committee approved	No response
Norway	81	7	0	4	4	11
Pakistan	90	2	2	0	0	8
Panama	89	9	3	3	4	1
Paraguay	95	2	0	0	2	3
Peru	94	1	0	0	1	5
Philippines	85	6	4	0	2	9
Poland	74	4	3	0	1	22
Portugal	93	0	0	0	0	7
Romania	91	5	1	1	3	4
Russian Federation	90	4	2	1	1	6
Rwanda	52	26	8	2	16	22
Senegal	93	0	0	0	0	7
Serbia	95	0	0	0	0	5
Singapore	82	9	5	2	4	9
Slovak Republic	93	0	0	0	0	7
Slovenia	91	3	2	0	1	6
South Africa	21	53	37	15	26	26
Spain	97	0	0	0	0	3
Sri Lanka	81	5	3	0	1	14
Sweden	86	4	0	4	0	11
Switzerland	95	0	0	0	0	5
Taiwan	77	12	9	0	2	12
Tanzania	74	6	3	0	3	20
Thailand	69	16	2	2	11	16
Trinidad and Tobago	79	10	7	2	2	11
Tunisia	80	4	1	1	1	16
Turkey	83	9	4	2	2	9
Uganda	78	11	5	1	5	10
Ukraine	99	1	1	0	0	0
United Kingdom	78	8	8	0	3	14
United States	73	8	4	2	2	19
Uruguay	91	2	0	0	2	8
Venezuela	94	3	3	0	0	3
Vietnam	85	6	2	4	1	9
Zambia	83	7	2	0	5	10
Zimbabwe	64	18	6	0	12	18

Income group subtotal						
Low income	79	8	4	1	4	13
Lower middle income	84	4	2	1	2	12
Upper middle income	84	7	5	1	3	9
High income	86	4	2	1	1	10

UNAIDS HIV prevalence group subtotal						
Prevalence <1	86	4	2	1	1	10
Prevalence 1 - 4	84	6	3	1	2	11
Prevalence 5 - 9	76	9	4	0	5	14
Prevalence 10 - 14	71	11	4	2	5	18
Prevalence 15 - 19	74	13	8	0	5	13
Prevalence >20	54	27	19	4	11	19

Regional subtotal						
Africa	73	12	6	1	5	15
Asia	82	8	4	2	2	10
Central America & Caribbean	89	4	3	0	1	7
Europe	89	3	2	0	1	9
Middle East & North Africa	67	3	1	1	1	30
North America	81	7	2	2	4	12
Oceania	95	0	0	0	0	5
South America	90	4	2	0	2	6
Overall	83	6	3	1	2	11

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Selected Global Health Initiative Resources

- Executive Statement and Resource Paper
<http://www.weforum.org/globalhealth/statement>
- Case Studies and Supporting Documents
<http://www.weforum.org/globalhealth/cases>
- Country Partnership Menus
<http://www.weforum.org/globalhealth/menus>
- Networking Directory
<http://www.weforum.org/globalhealth/directory>
- Workplace Guidelines
<http://www.weforum.org/globalhealth/guidelines>

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Joint United Nations Programme on HIV/AIDS

The Joint United Nations Programme on HIV/AIDS, UNAIDS (<http://www.unaids.org>) is the main advocate for global action on the epidemic. It leads, strengthens and supports an expanded response aimed at preventing transmission of HIV, providing care and support, reducing the vulnerability of individuals and communities to HIV/AIDS and alleviating the impact of the epidemic.

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