

## **CHAPTER 3**

# **THE EFFECT OF HIV/AIDS AS A POSSIBLE RISK TO THE WORLD, GLOBAL ECONOMY, INDIVIDUAL GOVERNMENTS, THE BUSINESS ENVIRONMENT AND ORGANISATIONS**

### **3.1 INTRODUCTION**

In the previous chapter it has been argued that professional internal auditors as control experts are well equipped to assist management to deal with control and risk. Internal auditing has also been described as a function that could add value in the business environment by evaluating and improving the control system, the risk management process and corporate governance processes. This is also true regarding the possible risk of HIV/AIDS to the organisation. Therefore, before the effect of HIV/AIDS on the control environment can be debated properly, it is important to focus on HIV/AIDS as a possible business threat.

HIV/AIDS is a known threat in the world, especially in Sub-Saharan Africa and South Africa (UNAIDS/WHO 2003). It is vital that the consequences of the disease on the economy, governments, and the business environment and individual organisations in particular are studied. Studies performed *inter alia* by the Centre for International Health, Boston University School of Public Health (2002), SABCOHA (2002), Deloitte & Touche (2002), and others have indicated that managements are aware of the possible risk posed by HIV/AIDS to their organisations.

Internal auditors first have to understand what HIV/AIDS is to be able to determine the extent of the problem, its effect(s) on the economy, the role of governments, the effect(s) on the business environment and organisations, and finally the role of management. Thereafter, internal auditors, in a consulting capacity should decide how management can be assisted to deal with HIV/AIDS as a possible risk.

### **3.2 THE NATURE, ORIGIN AND PREVENTION OF HIV/AIDS**

To determine the effect(s) of HIV/AIDS on the business environment, the organisation and the control environment, internal auditors need to familiarise themselves with how the virus works. The human immunodeficiency virus (HIV) enters the body and attacks the immune system. The immune system's function is to control or eliminate bacteria and viruses that threaten the body, and to eliminate damaged body cells that could become cancerous. If the immune system deteriorates, the body cannot fight diseases and becomes ill. When illnesses, anything from influenza to cancer, together with HIV attack the immune system, this is known as the acquired immune deficiency syndrome (AIDS). The result of AIDS is death (Ward 1999:386; Barnett & Whiteside 2002:34). Unfortunately, the knowledge that HIV causes AIDS and thus ultimately causes death is only the beginning of understanding the epidemic.

Today it is known that there are two types of HIV, namely HIV-1 and HIV-2. They are very similar, but HIV-1 is more aggressive in causing diseases. Apart from this difference in the two types of viruses, scientists have now identified 11 subtypes of the HIV-1 virus (Ward 1999:356, Janse van Rensburg 2000:267). Table 2 overleaf sets out the subtypes and the regions or countries where each type predominates. It is important to study and track each subtype, as each type responds differently to a given treatment. Re-infection by another type could damage the immune system even more rapidly than infection by only one type. The effect of re-infection on an organisation and its control environment could thus be catastrophic, as people who are infected with different subtypes become weaker more quickly and die faster. Management and the workforce need to know this.

Table 2: Predominant HIV subtypes in various countries and regions

HIV subtype	Region or country predominance
Also known as Group M (major):	
A	Central and East Africa
B	Americas, Europe, Thailand, Japan
C	Southern Africa, India
D	Central, East and South Africa
E	Thailand, Japan, India
F	Romania, Brazil, Zaire
G	West Africa
H	West Africa, Taiwan
I	Cyprus
J	Zaire
Group O	Unusual or recently identified subtypes that do not fit into the Group M categories

Source: Ward (1999:357)

Knowing how long a person has between infection and illness and death is important in plotting the effect of the epidemic on the economy and society. The period from HIV infection to death varies, depending on the circumstances of the individual. It has long been believed that with a healthy lifestyle (proper medical care, nutritious food, a stress-free life and non-exposure to infections), the period from initial HIV infection to the development of AIDS averaged ten years, and with proper treatment, including prescribed drugs, from the onset of AIDS to death, two years. However, recent studies have indicated that resistance to existing drugs is growing (Barnett & Whiteside 2002:44). The virus continues to mutate. Today, in addition to the subtypes indicated in Table 2, there are over 120 sites in its structure. Hence, the incubation period has shortened to an average of seven years (Barnett & Whiteside 2002:44).

The fact remains that HIV/AIDS is a disease that affects people throughout the world. To do something about the problem, the United Nations and other global institutions, governments, regions, organisations, society and individuals need to know of the problem, its origins, spread, treatment, prevention, and other important issues.

### **3.2.1 The origin and spread of HIV/AIDS**

Between 1980 and 1981, five young men in the United States of America were treated for a disease called *Pneumocystis carinii*, a disease usually found in older people. These cases were reported to and investigated by the Centre for Disease Control and Prevention, United States of America. The number of cases increased and soon scientists identified this to be a different illness. It was named AIDS (Ward 1999:366-368).

In 1984, HIV was identified as the cause of AIDS. The most crucial evidence came from a later study conducted in Thailand between 1988 and 1994, where 200 000 Thais were tested in 1988 and 700 000 Thais were tested in 1994(Ward 1999:378).

Scientists can still only speculate about the origin of HIV, but many believe that HIV-2 was present in an African monkey and became transmissible to humans through a series of mutations, and that HIV-1 was originally carried by African chimpanzees (Ward 1999:376; Janse van Rensburg 2000:267).

The means by which HIV is transmitted has been identified to be sexual contact (either heterosexual or homosexual); contact with blood (for example, blood transfusions) or other bodily fluids, blood products or tissues (through needle sharing, for example, in drug use or poor medical care), accidental needle pricks, or breaks in the skin; transfer from an infected mother to her infant before or during birth and breast-feeding (Ward 1999:35-37; Janse van Rensburg 2000:268). No new facts are known about the transmission of the virus and questions such as whether

a mosquito that bites a person will be able to spread the virus, can still not be answered with certainty. Societies and governments today focus on preventing infection and developing a vaccine (Barnett & Whiteside 2002:45). Although managements cannot help to develop new medicines (other than by donating money for research), it is important that organisations assist in preventing the disease from spreading. Internal auditors should assist management with this task, but must first understand the prevention and prognosis of the disease.

### **3.2.2 The prevention of HIV/AIDS**

At this point in time, there is no cure for HIV or AIDS. However, there are drugs that can slow the process. Antiretroviral drugs are the primary treatment for HIV. The type(s) chosen vary according to the individual, the stage of the disease, the body's resistance to the drug, re-infection by a different type of virus (see Table 2), and other factors. New drugs are being developed continuously, but various uncertainties remain, for example, about the resistance of the virus to these drugs (Ward 1999:76).

The success of any treatments depends on medical personnel's knowledge and understanding of HIV/AIDS and the drugs used. Patients must be educated on how to use the drugs, and motivated to use the drugs continuously, as side-effects are very severe and emerge as time goes by (Ward 1999:69). Management can play a leading role in motivating employees by implementing training programmes regarding the use of the drugs, possible side-effects and other factors regarding the drugs.

The cost of treatment also plays an important role. The cost of the drugs alone varies from US\$1800 per year per patient to US\$350, depending on the pharmaceutical company and the country. The amount spent on research has to be included in the cost. At this stage, research is focusing on the subtypes found mainly in Western Europe and the United States of America (Barnett & Whiteside 2002:45).

The only way to prevent the disease from spreading is for individuals to refrain from behaviour and practices that increase the risk of acquiring HIV and of transmitting it to somebody else. Thus, proper communication of knowledge about the disease, the study and change of social and cultural environments, proper health care, and other factors play an important role in preventing the disease from spreading (Barnett & Whiteside 2002:40). Management, with the help of internal auditors, should develop a proper plan to assist employees with this. First, it is necessary to know what the level of the spread of the epidemic is and which regions, countries and areas are at risk and which gender(s), age group(s) and intellectual levels amongst workers are affected.

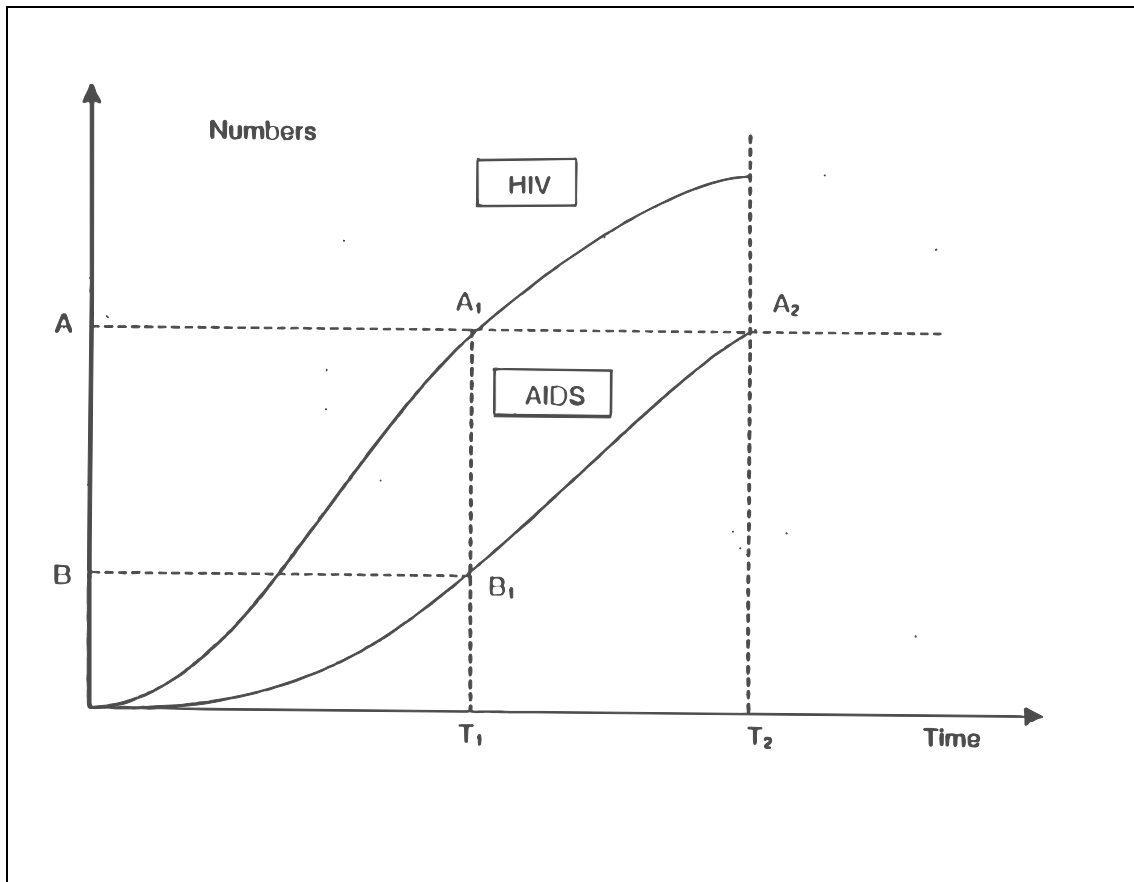
### **3.3 HIV/AIDS AS AN EPIDEMIC**

An epidemic is a rate of spread of a disease that reaches unexpectedly high levels, affecting a large number of people in a relatively short time. A pandemic refers to a collective description of epidemics of world-wide proportions, such as HIV/AIDS today (Barfield 1997). In modern society, with its transport networks, no community is isolated. Therefore it is easy for an epidemic to become a pandemic.

#### **3.3.1 The epidemic curve of HIV/AIDS**

All epidemics have a specific pattern: a disease infects the population slowly, affecting some and missing others. Then infection increases dramatically. Lastly, the number of new infections slows down as most people are already infected and the epidemic reaches a plateau (Barnett & Whiteside 2002:46). What makes HIV/AIDS different from other epidemics is the fact that there are two curves (see Figure 1), namely one for HIV and one for AIDS (Barnett & Whiteside 2002:47-48). This pattern followed by the illness makes this disease very dangerous, as people tend to forget about the second curve that follows the first a few years later.

Figure 1: The two epidemic curves of HIV/AIDS



Source: Barnett and Whiteside (2002:48)

At a given time ( $T_1$ ), the number of people infected with HIV ( $A_1$ ) does not dramatically influence the community or workforce, as some of the people will not even know they are infected or will not become ill, and the AIDS cases ( $B_1$ ) are low. People tend to forget that all people with HIV will get AIDS and will die. It is important for management to determine what the HIV rate is at a given time for their organisation, as this will not only help management to determine the effect of the disease on the organisation at that time, but will also give an indication of the risk to follow (AIDS cases). Internal auditors need to make management aware of this fact.

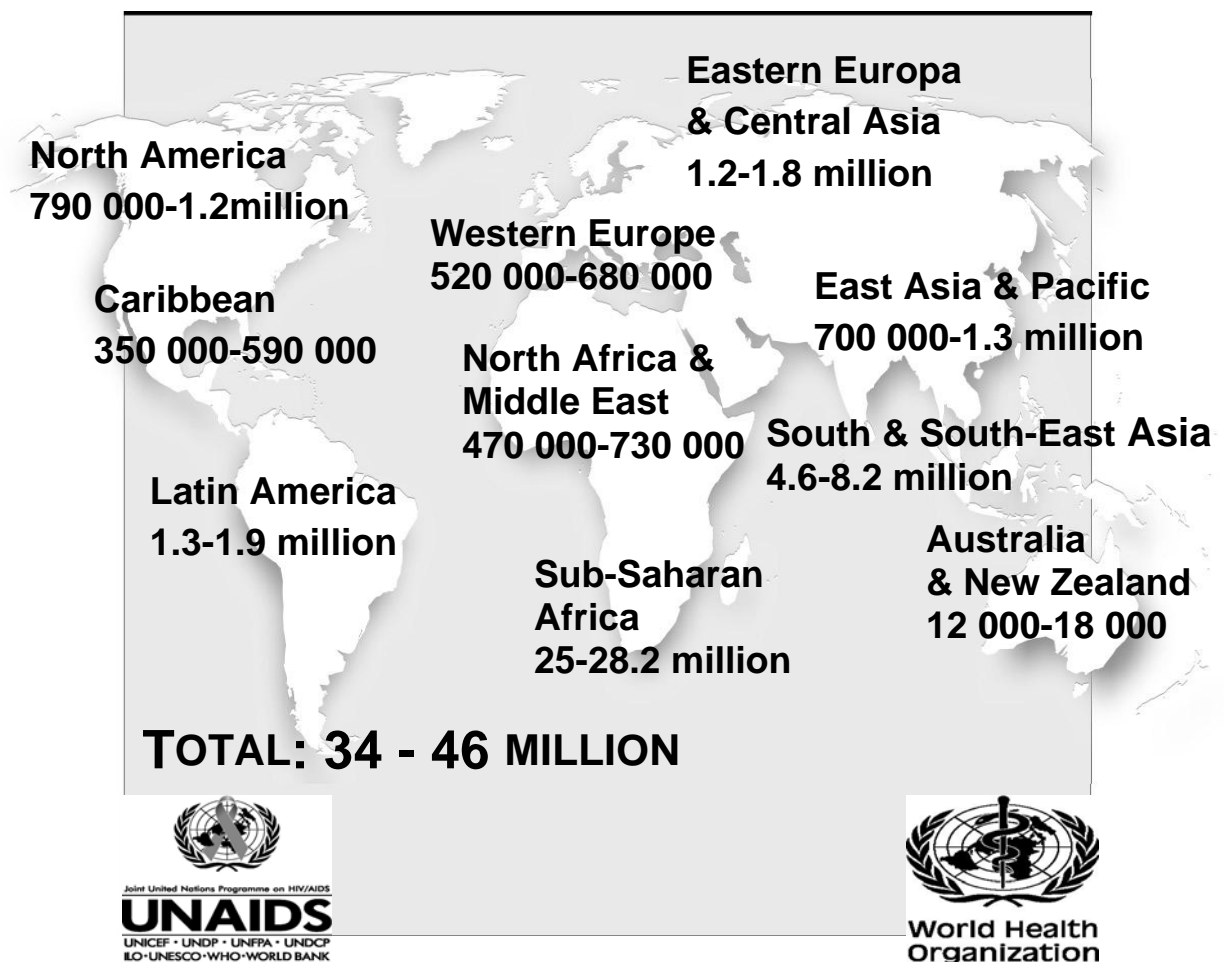
### 3.3.2 The estimated prevalence of HIV/AIDS

In the United Nations' programme on HIV/AIDS, called UNAIDS, the United Nations has joined forces with the World Health Organisation (WHO), to address this problem globally. Various studies by these

organisations and information received from different countries are published on a regular basis (UNAIDS/WHO 2002:1). Shocking figures were revealed in the latest UNAIDS/WHO report, issued in December 2003. Globally, it is estimated that AIDS claimed more than 3 million lives during 2003, an estimated 5 million were infected with HIV during this time, bringing the total number of people living with the virus to 42 million. Figure 2 (below) sets out the prevalence of the disease globally (UNAIDS/WHO 2003:36).

Globally, Sub-Saharan Africa is the most severely affected, with the Southern African Development Community containing the highest number of infected individuals (UNAIDS/WHO 2003:7).

Figure 2: Adults and children estimated to be living with HIV/AIDS, 2003

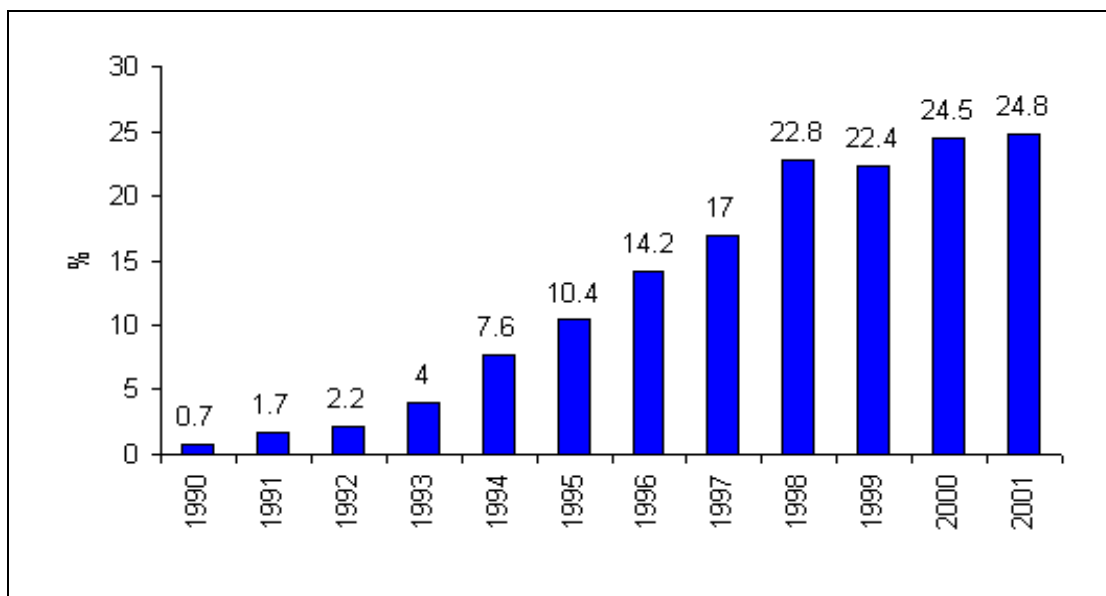


Source: UNAIDS/WHO Report, (2003:36)



In South Africa, the Department of Health annually performs a HIV/AIDS study by testing all pregnant women attending a public sector antenatal clinic (Department of Health 2001:1). This is not the most accurate method of determining the national HIV/AIDS prevalence rate, as abortions are not included. The fact that a woman who is HIV positive has 50% less of a chance of becoming pregnant than one who is HIV negative (Barnett & Whiteside 2002:19); that women are more likely to be infected than men (Ward 1999:216); that not all pregnant women attend public sector clinics; and many other reasons make this method problematic. The government has declared HIV/AIDS a non-notifiable disease (Department of Health 1997:33). Therefore, the following figures can only be an estimate of the extent of the disease in South Africa.

Figure 3: National HIV prevalence trends as a percentage of antenatal clinic attendees in South Africa, 1990-2001

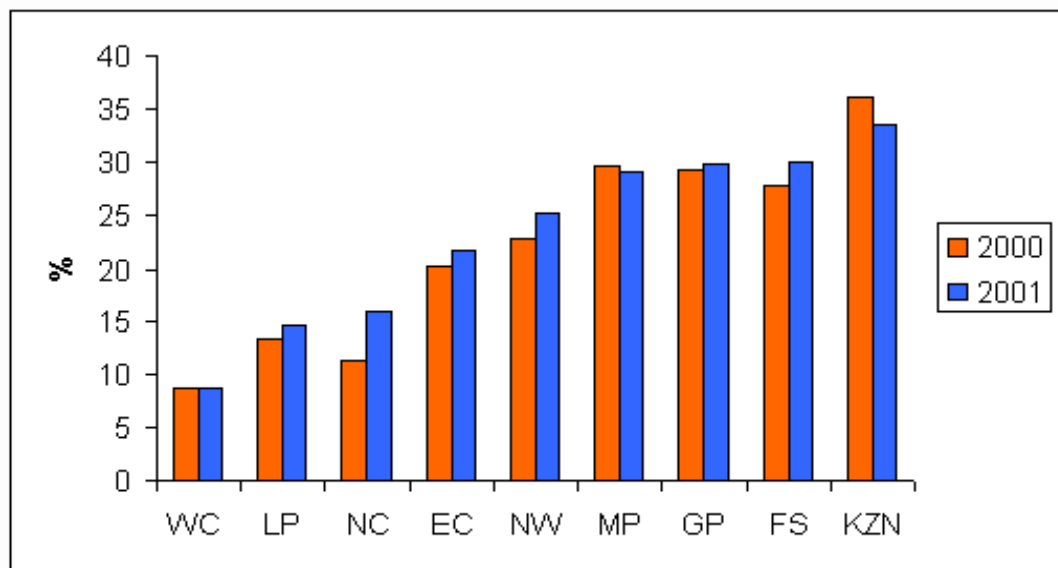


Source: Department of Health (2001:5)

From Figure 3, it seems that the HIV epidemic has reached a plateau (see Figure 1 - first curve) in South Africa. However, the question should be asked how accurate the information that these figures are based on is. Also, the population is decreasing as a result of people dying of AIDS (see Figure 1 - the second curve). Thus 24,8% of a smaller population has a much greater impact than 24,5% of a larger population.

The Department of Health has also used this study to identify the extent of the problem for different geographic regions and age groups (Department of Health 2001:6). These variances could have a direct influence on the workforce in general, as well as on certain organisations within a specific region. The following two figures indicate the infection rate per region for South Africa (Figure 4) and the rate per age group (Figure 5).

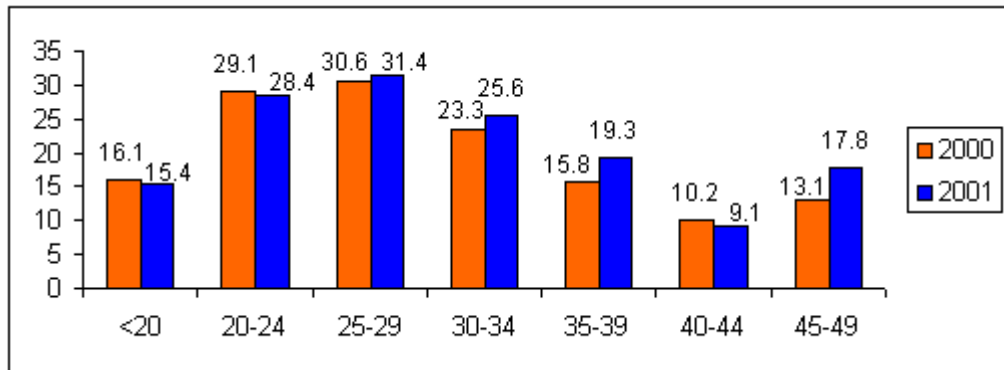
Figure 4: HIV prevalence as a percentage by province of antenatal clinic attendees in South Africa, 2000-2001



Source: Department of Health (2001:6)

The above indicates a growth in prevalence in six of the nine regions, with only KwaZulu-Natal and Mpumalanga showing a decrease. Again, it should be taken into account that the figures for KwaZulu-Natal were very high for the previous years, and it is possible that the population has decreased and that therefore the percentage will be affected. Management needs to be made aware of different infection rates, as these will have a direct influence on the existing workforce, as well as on potential employees, and therefore on the control environment (factors such as the possibility of part-time employees filling in for employees being ill, and many more).

Figure 5: HIV prevalence as a percentage by age group of antenatal clinic attendees in South Africa, 2000-2001



Source: Department of Health (2001:7)

Although there has been a slight decrease in the statistics for teenagers (<20), the 20 to 24 group, and the 40 to 44 group, a worrisome fact to the business environment is that infection levels are very high amongst young, economically active persons. This concern is also addressed by the UNAIDS/WHO (2002) and the South African Business Coalition on HIV/AIDS (SABCOHA 2002).

The figures above show that HIV/AIDS will not only influence the economy (for example, productivity and the consuming power), but will also have an overwhelming effect on the current and potential workforce, as the youth are our future. The disease is thus a major threat to the achievement of strategic business objectives and dealing with related business risks for individual organisations.

Governments and the business world should understand the effect that HIV/AIDS will have on the economy and the social environment, and how this will influence their tasks. It is their duty to bring this knowledge to the attention of communities and other role players. Hence, for management to really understand the effect of HIV/AIDS on its organisation, a proper prevalence study should be conducted amongst the workforce.

### 3.4 THE EFFECT OF HIV/AIDS ON THE ECONOMY

The most obvious impact of HIV/AIDS on the economy is its effect on the labour force. The disease mainly affects people within the most productive years of their life (see Figure 5). As labour is a key input in production, lower growth in the population and thus in the workforce will have a negative effect on economic growth (SABCOHA 2002:15).

Economic growth is determined by a country's productive capacity. Capital formation requires savings sourced domestically or internationally. Domestically, investments are threatened by HIV/AIDS, as an additional burden is placed on government finances (increased expenditure for prevention and treatment; and reduced revenue income because there are fewer people). Private sector savings are also negatively affected, as companies spend more on labour due to skills shortages, the cost of training new recruits, medical costs and various other factors. The potential for foreign investments is also threatened, as capital inflow only happens when investors see growth opportunities and new markets - unlikely with the extent of HIV/AIDS in South Africa (Nedcor Economic Unit 2001:3). It is therefore important for governments, the business environment, and the management of organisations in particular to be aware of the fact that HIV/AIDS can be seen as a potential business risk.

The overall effect on economic growth is, at this stage, purely speculative. Different assumptions and models have resulted in estimates of the impact of HIV/AIDS varying from a 0,3% subtraction from the annual Gross Domestic Product to more than 1,5% at the height of the crisis (Nedcor Economic Unit 2001:4). According to SABCOHA (2002:16), this figure is estimated at 1% for South Africa for the year 2001. The effect depends primarily on the response of the business environment, as well as government, over the next few years. Managements need to be made aware of these figures as this potential business risk could have a direct effect on organisations as well as on the control environment.

### **3.5 HIV/AIDS AS A CHALLENGE TO GOVERNMENTS**

As indicated above, governments face special challenges from HIV/AIDS, and although few data exist about the impact of the disease on government activities, it is essential to look at the role government has to play (Barnett & Whiteside 2002:295). One of the roles of government is to provide a service to communities, individuals and businesses. Therefore, government has to ensure that it has competent, healthy and sufficient employees to fulfil this role by focusing on the prevention of infection amongst government employees and the treatment of staff with HIV/AIDS. The government also has to implement strategies to help fight the disease by implementing prevention programmes and medical services, monitoring the effect on the economy, and regulatory measures to force individuals, businesses and others to address the problem (Barnett & Whiteside 2002:296-297). This must be successfully done with less government income, as productivity will decrease and both organisations and individuals will pay less tax.

At the Special Session of the United Nations General Assembly in June 2001, the world's governments adopted the Declaration of Commitment on HIV/AIDS (UNAIDS/WHO 2002:6). For the first time, time-bound targets according to which governments and the United Nations may be held accountable were set. In sub-Saharan Africa, 40 countries have developed national strategies and 19 countries have National AIDS Councils (UNAIDS/WHO 2002:8). In South Africa a strategic plan was designed in February 2000 to guide the country's response as a whole to the epidemic (HIV/AIDS/STD strategic plan for South Africa 2000:5). The Minister of Health, Dr Manto Tshabalala-Msimang, initiated the development of this strategic plan in July 1999, and all sectors of society have become actively involved, including the business environment.

Government saw the need to protect those with and without HIV/AIDS and this response was based on the principles in the Constitution of South Africa, Act No 108 of 1996 (South Africa 1996). In terms of section 9 of the Constitution, unfair discrimination, also against the HIV/AIDS infected, is prohibited. From this starting point, a number of laws were changed or implemented to prevent unfair discrimination based on HIV/AIDS, namely the Employment Equity Act No 55 of 1998, the Medical Schemes Act No 131 of 1998, the National Policy for Health Act No 116 of 1990, the Promotion of Equality and Prevention of Unfair Discrimination Act No 4 of 2000, the Labour Relations Act No 66 of 1995, the Occupational Health and Safety Act No 85 of 1993, and the Basic Conditions of Employment Act No 75 of 1997 (Strong 2002).

As each act of government can only address certain issues, the need for a more comprehensive set of guidelines for incorporating these laws and strategic plans into the working environment has become a necessity. The National Economic Development and Labour Council (2000) has developed a Code of Good Practice on Key Aspects of HIV/AIDS and Employment that sets out guidelines for employees and trade unions on how to manage HIV/AIDS within the workplace.

The new legislation has increased the possibility that HIV/AIDS could become a business risk to organisations. Managements need to know the content of these laws and other guidelines, and how this affects them in managing their workforce. This should be seen as a specialised field. The risk of increased litigation against organisations where employees feel that they have been discriminated against cannot be ignored. Internal auditors, as consultants to management, need to make sure that management is aware of these facts and of how they could influence the control environment.

### **3.6 THE EFFECT OF HIV/AIDS ON THE BUSINESS ENVIRONMENT AND INDIVIDUAL ORGANISATIONS**

As previously discussed, the effect of the disease on the economy depends heavily on the response of the business environment and governments to this threat over the next few years. Organisations, thus managements and by implication internal auditors, should take note of the effects of HIV/AIDS on their environment, including the control environment. If the disease not yet had a large impact, they should implement pro-active strategies and plans to minimise the impact. The effects of HIV/AIDS on organisations can be divided into two main groups, namely risks threatening the external environment and those influencing the internal environment. Internal risks can be further divided into direct and indirect risks (Randell 2002:88-89).

External risks include for example economic risks (a decrease in Gross Domestic Product growth, inflation increases as a result of increased labour costs); market risks (a decrease in demand as a result of a drop in the number of consumers); service delivery failure; the collapse of business partners' operations; and political/legislative risks (various laws that influence business operations). Statistics released by major companies confirm that these risks are real. One such example is the decline in beer production. According to News 24 (Stoddard 2002), South African Breweries (SAB) must expand their market globally as its domestic market is literally dying. A study conducted by the company projected that 12,58 million fewer litres of beer will be sold during 2002 as a result of AIDS, and 41,68 million litres less in 2006.

Risk influencing the internal environment can either be caused directly by death, absenteeism or illness, or indirectly, flowing from direct risks. Direct risks include the increased cost of group life cover; the cost of providing medical and retirement benefits; the cost of absenteeism; higher staff turnover (the cost of recruitment and training new staff); the cost of compassionate leave (attending funerals or attending to sick family

members) or sick leave (providing additional part-time employees to do the job); the cost of HIV/AIDS management programmes (including consultant's fees); the increased cost of bad debt as a credit risk; and many others (Randall 2002:88-89). Internal auditors in organisations have a crucial role to play in advising and assisting management in managing these risks.

Shocking statistics underlying these risks have been released by various companies. Examples include increased production costs for gold mine group Gold Fields Limited of about US\$6 per ounce. The cost to the company as a result of the disease for Anglo Platinum was R75 million for 2002 (Bain 2002:17). One of South Africa's biggest employers, Escom, spends R180 million annually on a HIV/AIDS programme (Isa 2002), and according to a study done by the minister of Public Service and Administration during 2000, AIDS is officially the biggest killer of public servants (Anonymous 2002). Where risks are properly identified and managed, such figures should not come as a surprise to management. It is internal auditors' duty to make sure that management is aware of all the facts and that effective risk management and control processes are in place to address this important issue.

Other risks flowing from direct risk are difficult to quantify most of the time. This does not mean that they are less serious or could be ignored. Indirect risks include reductions in staff productivity (as a result of illness); increases in staff supervision; fluctuations in competency levels (a high staff turnover); increased litigation (many laws and regulations regarding the treatment of employees with HIV/AIDS); higher salaries (the loss of skilled or managerial competencies); a loss of workforce morale (people without HIV/AIDS feel that they have to work harder); the loss of client relationships (due to high staff turnover); a decline in reputation in the business environment or clients (as a result of bad service); and many more (Randall 2002:88-89).



The above lists not only give an indication of the scope of possible risks, but also of the fact that HIV/AIDS is a risk to any organisation that has either customers and/or employees. The only way for organisations to address this risk is by implementing a proper risk management strategy. As discussed above, some of these risks are easy to quantify (for example, with the help of actuarial models), whilst others are more difficult to quantify. Risks threatening business objectives must be identified and measured. Then an appropriate risk management strategy should be decided upon. In the previous chapter it was established that a risk management strategy is the role of management. HIV/AIDS in general poses a risk to the business environment and therefore to organisations in particular. Every management must address the possible risk of HIV/AIDS as part of its duties.

### **3.7 THE ROLE OF MANAGEMENT WITH REGARD TO HIV/AIDS**

The King Report on Corporate Governance specifically states as one of its recommendations for sound corporate governance that companies should understand the social and economic impact that HIV/AIDS will have on business activities; adopt an appropriate strategy, plans and policies to address and manage the impact; regularly monitor performance; and report on HIV/AIDS to stakeholders (King Report on Corporate Governance 2002:117). From this, it is clear that it is essential for organisations not only to have a proper plan in place, but to report to stakeholders on this plan, as well as on the effect of HIV/AIDS on the organisation, including the control environment. The question to be asked is whether management is aware of this responsibility and if internal auditing, as a consulting activity, is assisting management in this task.

From a study performed by Deloitte & Touche (2002:5) in which 110 South African companies participated, it was clear that most of the larger companies (with more than 500 employees) do have a formal policy, but still tend to underestimate the effect that HIV/AIDS will have on these organisations. The study indicated that only 27,3% of the respondents in

the survey had commissioned a HIV/AIDS risk assessment to assess their current and future HIV/AIDS risk. This lack of foresight is probably the result of companies' not performing anonymous prevalence tests (only 11 indicated that either anonymous blood or saliva tests had been performed) and therefore they do not know the percentage of employees that is HIV positive.

Although, as is clear from the details discussed in this chapter, HIV/AIDS is a threat to the world economy and the business environment in general, the management of a given organisation will only know the true effects of the disease and how this should be managed in that organisation, after an in-house anonymous prevalence study has been conducted (SABCOHA 2002:15). Management will then know what the actual risk threatening the organisation is and can thereafter be assisted by experts to manage this risk. One of these types of expert is the internal auditor who plays a consulting role, adding value to the organisation regarding control systems, risk management and corporate governance.

### **3.8 CONCLUSION**

As can be seen from the above discussion, global institutions such as UNAIDS/WHO (2002), governments, the business environment (SABCOHA 2002), and many other role players have recognised the effect that HIV/AIDS could have on the world, society and closer to home, on organisations. Managing an individual organisation could be a complex task, as it includes many different areas that must be planned, directed, organised and controlled. Management can use experts to help accomplish this task successfully.

One of these types of experts is the internal auditing function. Internal auditors are control experts, but also play a consulting role regarding risk management and corporate governance. From the above discussion, it is clear that HIV/AIDS is a risk or potential risk to most organisations. It is therefore essential for internal auditing to inform management about this

risk and to assist management in managing the problem as part of corporate governance.

An internal auditor is a control expert, and from the discussion in the previous chapter, it is clear that the control environment forms the basis of the control system. Therefore internal auditors first have to determine the effect of the risk of HIV/AIDS on the different elements of the control environment to be able to determine its effect on the control system. The control environment consists of various elements (see the discussion in 2.6.1.1). If the possible effect of HIV/AIDS on these individual elements can be established, a clearer picture can be drawn (see Chapter 6) of what must be done by management, with the help of the internal auditor, to minimise the effect of the risk of HIV/AIDS on the control environment.