Foreign Portfolio Investment and Sustainable Development

A Study of the Forest Products Sector in Emerging Markets

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Maryanne Grieg-Gran, Tessa Westbrook, Mark Mansley, Steve Bass and Nick Robins

International Institute for Environment and Development

1. Introduction

1.1 Background

At the Rio Earth Summit in 1992 it was recognised that substantial financial transfers from the North to the South would be necessary for sustainable development to be achieved. It was assumed that much of these resources would be provided from public funds such as official development assistance. Somewhat less attention was given to the role of the private sector in these transfers, although Agenda 21 did stress the need for policies to increase the level of foreign direct investment (UNDPCSD 1997). However, in the last ten years there has been a marked increase in private capital flows to developing countries. Since 1986, these flows have grown from some US$25 billion per annum to over US$240 billion. At the same time official (public) flows have been declining in real terms such that by 1995 they accounted for less than 15% of aggregate net resource flows to developing countries compared with nearly 70% ten years earlier (World Bank 1997).

The increase in private capital flows has generated an intense debate about their impacts on developing countries. Proponents emphasise the positive impacts of such flows on growth and industrial development while critics express concern about the growing power of large transnational corporations, repatriation of profits and increasing indebtedness on the part of developing countries. More recently, the environmental and social impacts of private capital flows have received increasing attention. A common concern is that the economic growth resulting from such flows is unsustainable where it involves environmental degradation or adversely affects vulnerable groups of society. However, the potential contribution that private capital flows could make to sustainable development is being increasingly recognised. For example, in a recent review Gentry and Esty (1997) emphasise that the target of Governments should be "to harness the power of private investment to the achievement of a sustainable future".

1.2 Objectives and Scope of this Paper

The objective of this paper is to examine the issues involved in harnessing a particular type of private capital flow, namely portfolio equity, to achieve sustainable development objectives. While portfolio equity is not the most significant source of private capital, being exceeded by foreign direct investment, it has been growing the most rapidly, increasing more than fifty fold from 1986 to 1996 (although the current difficulties in Asian markets will no doubt have affected this rate of growth). In addition, the growth of ethical and green investment funds suggest increasing interest in the environmental and social impact of portfolio investment. For these reasons we focus on the potential of portfolio investment as a lever for sustainable practice and on portfolio equity in particular. The aim is to consider whether and how such flows can be used as a form of leverage to encourage activities that are considered to be sustainable and to discourage those with adverse environmental and social impacts.

This requires consideration of two questions:

- First, what type of impact does portfolio investment have on the development process? To what extent is it possible to link portfolio investment to positive impacts such as economic growth or to adverse impacts such as volatility, environmental degradation and social inequality?

- Second, what is the justification for governments and other stakeholders to intervene to influence portfolio equity flows to the South? Can sustainable development objectives be delivered by financial markets in their existing form, given the existence of green and ethical funds, or are there sources of market failure which need to be addressed?

We first review the debates in the literature on these two questions. However, in order to ground the arguments in the constraints and complexities of a particular sector we complement this review with a case study of the forest products industry, focusing in particular on tropical timber companies registered in Malaysia. There are a number of reasons for choosing the forest products sector:

First, the forest sector in developing countries has been a major focus of concern within NGOs and many international agencies such as the World Bank over the last two decades. Some of the most rapidly growing emerging economies, for example Malaysia , Indonesia and Thailand, have significant forest product sectors and have been the target of both local and international NGO campaigns to improve forest management and prevent deforestation.

Second, there have been some highly publicised attempts to influence investment in the sector. For example, in 1993, a consortium of NGOs organised a campaign to dissuade investors from purchasing shares issued by Barito Pacific, a major Indonesian forest products company. While not successful in affecting the take up of shares, the campaign raised awareness of the wider impacts of foreign portfolio investment.

Thirdly, there have also been significant developments in the area of certification of forests. A number of initiatives have been established, both international such as the Forest Stewardship Council and national such as the Canadian Standards Association's scheme. By July 1998 over 10 million hectares of forest had been certified (FSC 1998). While the aim of the certification initiative is primarily to influence consumers' decisions it can also provide useful information for investors.

In the case study we attempt to track portfolio equity flows to the forest products sector in Malaysia. This country was selected because it has a significant forest products sector and an established financial sector, and because a number of environmental organisations have expressed concern about the forest management practices of Malaysian timber companies, particularly with regard to their offshore operations. We attempt to assess whether foreign portfolio equity is being channeled to companies considered to have poor environmental and social performance. The aim is to establish whether in the context of a particular sector there is any scope for leverage.

1.3 Approach

As this paper is intended to be an exploration of the issues related to portfolio investment and sustainable development, we rely heavily on existing literature. However, in order to estimate the extent of foreign portfolio investment in the forest products sector in Malaysia we have collected data on investment holdings from a variety of sources including company reports, brokers' sector reviews, fund managers' reports, Bloomberg and Extel, and the Kuala Lumpur Stock Exchange. In order to gauge the attitudes of the investment community towards the environmental and social impacts of portfolio investment we have interviewed ten fund managers or research analysts from funds which have invested in the forest products sector. These interviews were intended to highlight issues for subsequent research rather than to be statistically representative. Such a survey would have been outside the scope of this present research. The discussion of the environmental and social performance of forest companies was derived from existing literature, including broker's reports and NGO reviews.

1.4 Structure

This paper is structured as follows:

- Section 2 surveys recent trends in portfolio investment flows to developing countries and examines the factors contributing to their spectacular growth.

- Section 3 surveys the literature on the relationship between portfolio investment and sustainable development. After a discussion of the perceived benefits of these flows in terms of economic growth and industrial diversification, the chapter considers some of the concerns expressed in the literature about the adverse economic, social and environmental impact of portfolio investment in general. The arguments for attempting to influence portfolio investment are then discussed. The different types of market failure associated with portfolio investment are reviewed as well as the policy options which are most appropriate for addressing these failures

- Section 4 examines the first of the two research questions specifically in the context of forestry. Particular emphasis is given to the forest products sector in Malaysia. It first attempts to assess the magnitude of portfolio investment to the forest sector, describing trends in such flows, the performance of forest equities relative to those of other sectors and the future prospects for such investments. It then considers whether such investments can be linked in any way to poor environmental and social performance in the sector.

- Section 5 looks at the second research question in the context of forestry. It considers how applicable the arguments for attempting to influence portfolio investment flows are to the forest products sector and explores some policy options.

- Section 6 provides a summary of conclusions and recommendations and identifies research needs to explore investment issues in more depth in the forest products sector and other sectors.

2. Portfolio Investment Flows To Developing Countries

2.1 Trends in capital flows to developing countries

Over the last decade both the size and composition of capital flows to developing countries has changed markedly (see Box 2a for definitions of types of capital flow). Official development finance has increased only slightly in nominal terms and has declined in real terms. In 1994-1995 the assistance component of this was at its lowest point in 20 years as a percentage of donor GDP (World Bank 1996). At the same time there has been a marked growth in the flows of private capital to developing countries, as shown in Table 2a. Total private flows increased by more than 800% over the period 1986-1996. In 1986, official flows accounted for nearly 70% of aggregate net resource flows to developing countries but by 1996, their share had fallen to less than 15%.

Box 2a: Types of Capital Flow

Official Development Finance

Official development assistance (grants and concessional loans) plus official non-concessional loans (multilateral and bilateral).

Foreign Direct Investment

This is defined by the World Bank as investment made to acquire a lasting interest in an enterprise (usually 10% of the voting stock) operating in a country other than that of the investor and where the purpose is for the investor to gain an effective voice in the management of the enterprise (World Bank 1995).

Portfolio Equity

This is defined as investment which is made for the purpose of securing income or capital gains growth rather than to gain control of an enterprise. Such investments would normally be held in a range of companies with the aim of diversifying and reducing risk.

Portfolio Bonds

These are similar to portfolio equity in that the aim is to secure a financial return rather to gain control of an enterprise and that investors would normally hold bonds in a range of companies. Like portfolio equity they are bought and sold on a secondary market . The difference is that they are a loan rather than a share in the company. Bond holders thus receive a pre-determined rate of interest rather than a dividend payment which depends on the profit performance of the company.

Commercial Bank Loans

These differ from bonds in that they are arranged directly between a limited number of banks and the company and are not generally traded on a secondary market.

Table 2a Aggregate net* long-term resource flows to all developing countries, 1986-1996

US$ billions

Indicator	**1986**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996** [p]
Aggregate net resource flows*	81.1	84.5	101.6	122.5	146.0	212.0	207.0	237.2	284.6
Total private flows	25.4	41.9	44.4	56.9	90.6	157.1	161.3	184.2	243.8
(% of net resource flows)	*(31.3)*	*(49.6)*	*(43.7)*	*(46.4)*	*(62.0)*	*(74.1)*	*(77.9)*	*(77.5)*	*(85.7)*
Private debt flows	11.7	12.7	16.6	16.2	35.9	44.9	44.9	56.6	88.6
(% of total private flows)	(46.1)	(30.3)	(37.4)	(28.5)	(39.6)	(28.6)	(27.8)	(30.8)	(36.3)
Commercial banks	3.3 [i]	0.9 [i]	3.0	2.8	12.5	-0.3	11.0	26.5	34.2
Bonds	0.8 [i]	5.3 [i]	2.3	10.1	9.9	35.9	29.3	28.5	46.1
Others	6.3 [i]	3.1 [i]	11.3	3.3	13.5	9.2	4.6	1.7	8.3
Private equity flows	13.7	29.2	27.7	40.7	54.6	112.2	116.4	127.6	155.2
(% of total private flows)	(53.9)	(69.7)	(62.4)	(71.5)	(60.3)	(71.5)	(72.2)	(69.4)	(63.7)
Foreign direct investment	12.9	25.7	24.5	33.5	43.6	67.2	83.7	95.5	109.5
(% of total private flows)	(50.8)	(61.3)	(55.2)	(58.9)	(48.1)	(42.8)	(51.9)	(51.9)	(44.9)
Portfolio equity flows	0.8	3.5	3.2	7.2	11.0	45.0	32.7	32.1	45.7
(% of total private flows)	(3.1)	(8.4)	(7.2)	(12.6)	(12.1)	(28.7)	(20.3)	(17.5)	(18.7)
Portfolio bond + equity flows	1.6	8.8	5.5	17.3	20.9	80.9	62.0	60.6	91.8
(% of total private flows)	(6.3)	(21.0)	(12.5)	(30.4)	(23.1)	(51.5)	(38.4)	(33.0)	(37.6)
Official development finance	55.7	42.6	56.3	65.6	55.4	55.0	45.7	53.0	40.8
% of net resource flows	(68.7)	(50.4)	(55.4)	(53.6)	(38.0)	(25.9)	(22.1)	(22.3)	(14.3)
Official grants	20.3	19.2	29.2	37.3	31.5	32.4	32.4	32.6	31.3
Official loans	35.4	23.4	27.1	28.3	23.9	25.7	20.4	20.4	9.5

*** *Net of loan repayments . Includes only loans with an original maturity of more than one year. Exludes IMF transactions.*

Developing countries are defined as low and middle income countries with 1995 per capita incomes of less than $765 (low) and $9,385 (middle).

p: Preliminary

Source: 1990-1996: World Bank, Global Development Finance 1997.

i 1986-1989: The World Bank, World Debt Tables 1993-4 and 1994-5.
IFC Emerging Stock Markets Factbook, 1996

There have also been significant changes in the composition of private flows to developing countries. The share of debt flows has declined and that of equity flows has increased. Foreign direct investment continues to account for the major part of private resource flows but portfolio equity investment has shown more spectacular growth. From just 0.1% of total private flows between 1977 and 1982 (Hernandez and Rudolph 1995) and 3% of total private flows in 1986, its share increased to nearly 30% in 1993. The following year, its share dropped significantly in response to various factors: the financial crisis in Mexico; rises in interest rates and monetary tightening in industrial countries; the spectacular performance of the US stock market in 1995; and concerns about over-heating of Asian economies (IMF November 1995). In 1996, portfolio equity flows to developing countries started to increase again and private sector forecasts were suggesting that equity flows to Latin America and Asia would rise substantially. However, with the current financial crisis in several Asian countries it is likely that growth in equity flows will be interrupted again.

Although the overall share of debt flows has been declining, portfolio bonds have also been growing in importance. In 1986, they represented only 3% of total private flows, but by 1996 their share had increased to roughly 19%. In 1993, the share of portfolio bonds and equity combined exceeded that of foreign direct investment although this position was not maintained.

2.2 Geographical Distribution of Portfolio Equity Flows

Over 60% of portfolio equity flows to developing countries is concentrated in East Asia and Latin America as shown in Table 2b. Within these regions certain countries have accounted for a significant share of such flows. Over the period 1989 to mid 1993, 85% of all portfolio flows (debt and equity) to East Asia were concentrated in just four countries: China, Indonesia, Korea and Thailand (Gooptu 1994). Similarly, in Latin America, over 85% of portfolio equity flows in 1996 were directed to Brazil, Mexico and Peru (World Bank 1997).

Table 2b Distribution of Portfolio Equity Flows to Developing Countries 1996

Region	**Portfolio Equity US$bn**	**%**
East Asia & Pacific	12.9	28.0
South Asia	5.4	11.8
Latin America and Caribbean	16.5	36.1
Europe and Central Asia	6.7	14.6
Middle East and North Africa	0.6	1.3
Sub-Saharan Africa	3.6	7.9
Total developing countries	45.7	100.0

Source: World Bank 1997

2.3 Factors Contributing to the Increase in Portfolio Investment Flows

A wide range of factors has prompted the increase in private capital flows to developing countries and opinions differ as to the relative contribution of "push" factors reflecting changes in developed country markets and "pull" factors arising from changes in developing countries. The last two decades have seen a large growth in the financial sector in developed countries and in increasing availability of funds for investment. This reflects the impact of financial deregulation, the growing number of people saving for retirement and the increasing prominence of institutional funds managing savings, pensions and insurance. The direction of an increasing proportion of such funds to developing countries may be prompted by push factors. Thus Fernandez-Arias (1994) emphasises the impact of low interest rates and low economic growth in developed countries which "push" investors to seek higher returns in emerging markets. Table 2c shows that return indexes for equities in Asia and Latin America from the end of the 1980s until the mid 1990s were higher than in the US and Europe. (With the recent falls in share prices in emerging markets this situation will have changed dramatically).

Table 2c Total Investable* Return Indexes 1989-1995
(US$ end 1988 = 100)

Index	1989	1991	1993	1995
IFC Latin America	176.2	460.0	764.9	576.5
IFC Asia	154.1	139.9	327.7	270.1
US, S&P 500	131.6	166.2	196.8	219.3
FT, Europac	111.3	95.4	109.4	157.1

Source: IFC Emerging Markets Factbook

** Investable index is calculated on the basis of stocks that are legally and practically available to foreign portfolio investors.*

Alternatively, it may be more related to changes in economic policies in developing countries given the proliferation of structural adjustment programmes. Thus some researchers, for example, Chuhan *et al* (1993) and Hernandez and Rudolph (1995), emphasise the "pull" factors such as successful domestic economic policies involving increased domestic saving and investment, reduction in the size of the government deficit and an increase in export growth.

Looking at portfolio investment specifically, the upsurge in flows may reflect actions taken by developing countries and investing countries to remove barriers to such investment and actively promote it. These include:

- Establishment of new securities markets;
- Liberalisation of securities markets;
- Actions taken by investing countries or international agencies to facilitate investment in developing countries;

- Privatisation in developing countries.

Establishment of Securities Markets in Developing Countries

By 1995 over 60 developing countries had established stock exchanges although these varied considerably in size in terms of number of companies listed and market capitalisation. Further stock exchanges are planned for a number of economies in transition and some African countries, for example Tanzania and Cameroon (IMF 1995).

The market capitalisation of these emerging stock markets and the value of trades has grown much faster than in developed country markets, as shown in Tables 2d and 2e. The number of companies listed on developing country stock exchanges doubled over the period 1986-1995 whereas it declined by 5% in developed markets (IFC 1996).

In the first half of the 1990s, the share of developing countries in global equity issues exceeded 30% except in 1995, when it dropped sharply reflecting the financial crisis in Mexico. Their share of private sector portfolio bond issues was even higher reaching 56% in 1994 and dropping to 50% in the first half of 1995 (IMF 1995). Further fluctuations can be expected as a result of the recent financial upheavals in Asia.

Table 2d: Stock market capitalization 1986-1995 *(*US$ Trillions)

Market	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
World total	6.51	7.83	9.73	11.71	9.39	11.29	10.83	13.96	15.15	17.79
All emerging markets	0.24	0.32	0.48	0.74	0.61	0.85	0.88	1.59	1.91	1.90
% of world total	*3.7*	*4.1*	*5*	*6.3*	*6.5*	*7.6*	*8.2*	*11.4*	*12.6*	*10.7*
All developed markets	6.28	7.51	9.25	10.98	8.78	10.44	9.95	12.38	13.24	15.89
% of world total	*96.3*	*95.9*	*95*	*93.7*	*93.5*	*92.4*	*91.8*	*88.6*	*87.4*	*89.3*

Source: IFC Emerging markets stockmarkets factbook, 1996.

Table 2e: Value traded on stock markets 1986-1995 *(*US$ Trillions (year end values))

Market	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
World total	3.57	5.85	6.00	7.47	5.51	5.02	4.78	7.70	10.09	11.67
All emerging markets	0.08	0.16	0.41	1.17	0.89	0.61	0.61	1.07	1.64	1.03
% of world total	*2.3*	*2.8*	*6.8*	*15.6*	*16.2*	*12.1*	*12.8*	*13.9*	*16.3*	*8.9*
All developed markets	3.49	5.68	5.59	6.30	4.62	4.41	4.16	6.63	8.46	10.63
% of world total	*97.7*	*97.2*	*93.2*	*84.4*	*83.8*	*87.9*	*87.2*	*86.1*	*83.7*	*91.1*

Source: IFC Emerging markets stockmarkets factbook, 1996.

Liberalisation of Securities Markets

Over the last decade there has been steady removal of barriers to foreign portfolio investment in many developing countries:

- Stock markets previously closed to foreigners were opened up, eg: Mexico (1989), Taiwan (1990), Brazil (1991), Korea (1992) and Kenya (1995).
- Ceilings on foreign ownership of listed companies were raised, eg: Korea (1995).
- Dividend taxes were removed, eg: Malaysia (1990) and Mexico (1990), or lowered, eg: Brazil (1991) and India (1991).
- Capital gains taxes were removed, eg: Thailand (1991) and Argentina (1991), or lowered, eg: Brazil (1991), India (1991).
- Repatriation was facilitated through elimination of holding periods, eg: Argentina (1991) and Brazil (1991), or reduction, eg Chile (1992), and exchange control deregulation, eg: Thailand (1991).
- Restrictions were relaxed on domestic companies' access to international equity markets, eg: Korea (1997).
- Foreign brokers have been allowed access to developing country markets, eg: Thailand (1994) and Mexico (1995).

(Source: Mullin 1993 and IMF 1995)

There have also been moves to improve the operation of securities markets in developing countries, for example through more efficient clearance and settlement systems and market surveillance (IMF 1995).

Actions taken by Investing Countries or International Agencies

Investment in developing country companies was stimulated during the 1980s by the establishment of closed end funds[1]. These were promoted by the IFC which both advised developing countries on legal and regulatory frameworks and underwrote and invested capital in these funds. In 1990, they accounted for US$3.4 billion but in the 1990s appear to have been supplanted by direct purchases in developing country stock markets or by international placements, for example, in the form of American Depository Receipts(ADR)[2] or Global Depository receipts (GDR) (Mullin 1993).

Such placements can be carried out by obtaining listings on a developed market exchange or through private transactions involving the sale of shares to a selected group of individuals or

[1] A fund set up by an investment company that issues a fixed number of shares to its investors (Oxford Dictionary of Finance 1996)..

[2] A certificate issued by a US bank stating that a specific number of shares in a foreign company has been deposited with them. The certificate is denominated in US dollars and can be traded as a security in US markets (Oxford Dictionary of Finance 1996).

institutions. They have become increasingly common in the 1990s. According to the IMF (1996) ADR/GDR issues by developing countries accounted for 77% of their total equity issuance in 1994, but this ratio dropped sharply to 48.8% in 1995.

Regulatory change in the US in 1990 provided a stimulus to international placements. Institutional buyers were exempted from a requirement to hold privately placed securities for two years before trading them. This increased the liquidity of privately-placed ADRs thus making them more attractive (Mullin 1993). Similarly, the London Stock Exchange (LSE) in 1994 introduced regulations which enable foreign-listed companies to list sterling-denominated depositary receipts on the exchange. The requirement to be listed on LSE was removed . (ref?)

Developed countries have taken other actions to promote investor interest in developing countries:

- The US Securities Exchange Commission has assigned recognised custodian status to Costa Rica, Mexico and Thailand. This allows their custodian services to handle securities deposited by US investors and thus simplifies clearance and settlement procedures (IMF 1995).

- Restrictions on pension funds in Japan and Chile were relaxed in 1995 after which they were allowed to expand their list of eligible assets to include emerging stock markets (IFC 1996).

Privatisation

Another contributing factor to private capital flows has been privatisation of public sector corporations in developing countries. In many of the smaller markets this constituted the main source of equity issuance and trading activity. Mullin (1993) provides some examples of the impact of privatisation on developing country equity markets:

- In Malaysia the ratio of equity issuance to gross domestic investment reached a peak in 1990 the same year that the state-owned telecommunications company was privatised.

- In Mexico, sales of shares in the state-owned telephone company TELMEX between 1990 and 1992 exceeded US$3 billion compared to total international equity issues for Mexico of US$6.6 billion in 1991 and 1992 (IMF 1995).

Mullin further argues that privatisation can have a lasting effect on developing country equity markets as it provides the stimulus necessary to increase market depth (ie the number of investors) beyond a critical level. Many developing country equity markets tend to be “thin” markets with few traders. Prices can be very sensitive to these traders’ decisions, which leads to high volatility. This may deter investors from participating, thus creating a cycle of low demand and low issuance which can continue until an external factor, such as privatisation, boosts demand.

3. Portfolio Investment And Sustainable Development

There is a substantial amount of literature discussing the advantages and disadvantages of private capital flows on developing countries. This is part of a wider debate about the impacts of globalisation, market deregulation and the decreasing influence of the state. The main focus of this literature has been on foreign direct investment, in particular the role of transnational companies, and on commercial debt flows. Portfolio equity flows have received rather less attention although they are often included implicitly in general discussions about private capital flows. Much of the literature on portfolio equity flows to the South has addressed their economic impacts, both positive and negative, with less attention being given to their social and environmental impacts. At the same time, there has been a long-standing concern in the North about the wider impacts of portfolio investment as evidenced by the establishment of numerous ethical and green funds. However, it is only recently that concerns about the social and environmental impact of portfolio equity flows to developing countries have become prominent.

3.1 Economic Debates about Portfolio Investment in the South

Debates about the merits of portfolio investment have specifically centred on two issues:

- how portfolio equity, (both foreign and domestic) compares with other forms of finance available to companies in developing countries, typically debt finance, in terms of encouraging economic growth and long-term investment;

- the implications of liberalising portfolio investment markets in developing countries and increasing access to foreign capital.

Economic arguments for increased portfolio investment focus on its contribution to industrial development and growth. Thus, some studies have found a positive and statistically significant relationship between stock market activity and rates of economic growth (eg Atje and Jovanovic 1993; Levine and Zervos 1995 cited in Feldman and Kumar 1995).

Other researchers have looked at the role of portfolio investment in countries which have achieved high growth rates. Mullin (1993) shows that the ratio of equity issuance to domestic fixed investment has been particularly high for some newly industrialising developing countries characterised by high growth rates. For example, in Taiwan, Korea and Malaysia, this ratio was close to 15% during 1989-1992. In contrast, in certain developed countries (US, Canada, Italy, Japan, UK) this ratio has not been higher than 7% since the 1960s. Similarly, Singh (forthcoming) finds that new equity issues in Korea, Malaysia, Mexico, Turkey and Zimbabwe financed more than 40% of the growth of new assets between 1980 and 1990, significantly higher than for developed country firms which tend to rely more on other sources of finance such as retained earnings. Based on this statistical comparison between developed and developing countries Mullin concludes that equity issuance is particularly important for countries like Taiwan and Korea that are farthest along the path of industrialisation and which are moving from labour intensive products to higher value-added production. In support of this conclusion he cites the historical record of the US which had high ratios of equity issuance to gross domestic fixed investment before World War II and rather low ratios thereafter.

More qualitative benefits focusing on the advantages of equity (both foreign and domestic) over debt are cited by Feldman and Kumar (1995):

- With equity finance, firms are less vulnerable to fluctuations in earnings or interest rates as dividends can be varied according to circumstances.

- Debt finance may be unavailable in many countries other than to a select group of companies because of imperfect information about the risk characteristics of different groups of buyer.

- Well-functioning equity markets lead to a more efficient allocation of capital as the continuous valuation of share prices based on company performance and the implied possibility of mergers and takeovers lead to financial discipline.

These authors note a common criticism made of equity-based finance systems relative to those based on bank loans, that they tend to discourage long-term investment and thus adversely affect competitiveness and growth. The argument is that company management has to focus on meeting shareholders' immediate demands for returns and thus fails to invest sufficiently in activities with a longer-term payoff such as research and development. This concern has also been expressed about investment in developed countries. In the UK, a survey carried out by the Department of Trade and Industry Advisory Board suggested that the relations between the corporate sector and the financial institutions had resulted in too high a priority being given to short-term profits at the expense of research and development (Pike and Neale 1996). Similarly, in the US, researchers have argued that the increasing involvement of institutional investors has had a damaging effect on corporate research and development expenditure as such investors are focused on short-term quarterly earnings (Graves 1988; Porter 1992). However, these claims have been contested and other factors such as managerial short-termism have been advocated as the reason for the perceived lack of long-term investment (Marsh 1990). Pike and Neale (1996) note that the debate on short-termism in the UK highlights the need for companies to provide better information to financial institutions about their long-term investments.

Feldman and Kumar (1995) also identify potential benefits from increased access to foreign portfolio investment:

- Risk is absorbed in part by foreign investors through adjustments in dividend payments and equity prices.

- Inflows of equity finance are often accompanied by improved reporting and accounting standards and can increase the exposure of domestic companies to advanced supervisory and managerial techniques.

- There is a net gain to the world economy as scarce capital is channelled to those regions and sectors giving the highest returns.

- Investors in industrial countries may benefit from diversification where share price movements in developing country markets are not highly correlated with developed country market (but the evidence for this mixed).

The main concerns in the economics and finance literature about the effects of portfolio investment flows on developing countries relate to volatility. There is considerable evidence that securities markets in developing countries have been characterised by high volatility and pricing inefficiencies. In part the volatility characteristic of developing countries' securities markets reflects the thinness of some markets such that activity by just one or two traders can have a large impact on prices. As these markets develop and the number of traders increases, such volatility can be expected to diminish. However, there is also a view that price volatility is the result of speculative pressures. Share prices are bid up because investors believe prices will remain high or increase still further rather than because of fundamental factors relating to the company's financial position (Feldman and Kumar 1995). Prices then fall abruptly when there is an external change which affects investor confidence and outlook.

A common view is that the more dependence there is on international flows the more acute the problem of volatility, as developments in other countries can affect decisions of foreign investors. Most securities markets in developing countries, regardless of their economic performance, felt at least some temporary effects from changes in investor behaviour after the Mexico crisis in 1995, as evidenced by the decline in portfolio equity flows to all developing country regions (IMF 1996). This same phenomenon has been seen more recently with securities markets in Latin America, notably in Brazil, coming under pressure following the falls in share prices in Asian countries. It is further argued that the effects of foreign investors' decisions on price volatility can be exacerbated if local investors follow the lead of the foreign investors (IMF 1996).

There is also some concern that the increasing participation of foreign institutional investors in developing country markets may be a factor leading to increased volatility. Box 3.1 sets outs some of the arguments.

Box 3.1: The Impact of Institutional Investors on Volatility

As institutional investors often have similar characteristics and risk/return preferences, they would tend to react in a similar way to external shocks. Thus a number of them can be expected to sell in the event of a downturn in expectations regarding returns. This simultaneous action by a number of large holders can affect price still further (IMF 1996) Another factor is that institutional investors appear to treat emerging markets as a separate asset class. Investors typically follow a two step-process in allocating their portfolio: first to asset classes and then to individual securities within the asset class on the basis of economic indicators of expected return. As a result, there can be a shift in investor preferences away from the asset class as a whole, which means that securities will be sold in a number of countries without fully reflecting differences in underlying economic factors (Aitken 1996). However, this situation would be unlikely to persist. If the selling behaviour of institutional investors pushes prices out of line with underlying economic fundamentals other investors would come into the market to exploit these opportunities. This was borne out by the experience of Asian markets after the Mexico crisis in 1995. Although there were selling pressures, these were short-lived, reflecting these countries' relatively strong economic positions (IMF 1996).

Not all researchers agree that volatility in emerging markets has increased in line with increasing foreign participation. Richards (1996) in a statistical analysis of the variation in returns in emerging markets over the period 1975-1995 finds no evidence that volatility has increased and tentatively concludes that contrary to popular perception it may even have declined in the period when foreign participation was on the rise. He argues that the perception of increased volatility may simply reflect the fact that emerging markets are subject to more international attention now.

There is a consensus that volatility, whatever its trend may be, is primarily a reflection of immature markets. This suggests that the solution is not to curtail the activities of portfolio capital markets in developing countries or close off foreign access but rather to help them to expand in coverage and become more resilient in the face of external shocks.

3.2 Social and Environmental Debates about Portfolio Investment

The Origins of Green/Ethical Investment[3]

Concerns about the wider impact of investment can be traced back to the 1920s in the US and the 1940s in the UK. In both cases religious groups holding significant amounts of capital were anxious to avoid investment in activities that conflicted with their beliefs. Activities such as manufacture of armaments, production and retailing of alcohol and tobacco, and gambling were considered areas to avoid (Blighe 1997). Initially, concerns centred on the ethical issues associated with portfolio investment in general regardless of the country concerned. In the 1970s the emphasis broadened to include environmental issues while attention began to be focused on investment in specific countries where human rights were a concern, the main example being South Africa (see Box 3b). Concern about the impact of portfolio investment flows to the South more generally is comparatively recent.

In both the UK and the US, religious groups have continued to play an important part in the debate about the impact of investment. In the UK since the 1940s, the funds of the Church of England have been invested according to ethical guidelines, which prohibit investment in certain areas: arms, alcohol, tobacco, gambling and newspapers. This has the effect of excluding about 13% of the UK stock market. The Methodist Church adopted an ethical investment approach from the 1970s and in 1983 set up an Ethics of Investment Committee to advise on ethical considerations relating to finance. The Society of Friends (Quakers) set up a working group on investments in 1979 in response to concerns that the investment policies of the Society did not match its ethical beliefs. The Society of Friends was also instrumental in the establishment in 1983 of the Ethical Investment Research and Information Service (EIRIS) which aimed to provide a monitoring service for investments.

The Quakers and the Methodists also worked together to secure Government approval for the development of the first "ethical" unit trust in the UK, the Friends Provident Stewardship Trust, which was established in 1984. This combined negative and positive criteria for the selection of investments and addressed both ethical and environmental issues. On the negative side it sought to avoid investing in the tobacco industry, alcohol, gambling, the arms trade, exploitation of animals and oppressive regimes, as well as companies associated with environmental degradation. On the positive side it aimed to seek out companies with good

[3] This section draws heavily on the discussion in Chapter Seven of The Ethical Investor by Russell Sparkes 1994.

track records in labour relations, health and safety and environmental protection. The emphasis was on balancing positive and negative criteria and assessing the overall significance of any activity considered to fall within the negative criteria rather than operating an absolute exclusion policy. This had the effect of excluding about 40% of the UK stock market.

Other UK funds established subsequently have adopted different approaches. Some have placed more emphasis on exclusionary negative criteria. For example the NPI Global Care Trust, established in 1991, identified a number of areas such as pornography, South Africa, animal research, and nuclear power for absolute exclusion and others such as oppressive regimes, tobacco and tropical hardwood for predominant exclusion. These criteria had the effect of excluding about 90% of UK companies. Some funds such as the Merlin Jupiter Ecology fund and those of NPI have emphasised “constructive engagement” whereby fund managers, rather than selling shares of unacceptable companies, work with company managements to try to secure improvements in key areas.

Box 3b: Concerns about Investment in South Africa

United Kingdom

Investment was a key issues in the Anti-Apartheid campaign along with other actions such as consumer boycotts and pressure on bank lending to South Africa. Initially the attention was focused mainly on UK companies or banks operating in South Africa or supplying key inputs to it. Thus Shell which was believed to be a significant supplier of oil to South Africa was pressured by shareholders at its annual meetings to suspend supplies. Pressure on fund managers to sell holdings in South African companies or in UK companies operating there came later but was less influential than in the US. Pension funds were pressured by trade unions to exclude direct investment in South Africa while the Bishop of Oxford took the Church Commissioners, who were in charge of the Anglican Church’s investments, to court in an unsuccessful attempt to compel them to disinvest totally in South Africa.

United States

The Sullivan Principles, launched in 1977, set out minimum labour standards for US companies operating in South Africa. A number of organisations monitored adherence to the standards, including the Interfaith Centre for Corporate Responsibility. Adherence to the Sullivan principles initially constituted a pre-requisite for investment in South Africa. Thus in 1982, the State of Connecticut passed legislation requiring all companies in which it invested to follow the Sullivan Principles. Subsequently, the University of Wisconsin and the New York State Pension funds sold all their holdings of companies which did not adhere to the Sullivan Principles. But after a state of emergency was declared in South Africa in 1985, campaigning groups exerted pressure for all US investment in South Africa to be withdrawn. A number of state governments starting with California in 1986 passed legislation requiring their pension funds to divest from companies with activities in South Africa.
Source: Sparkes 1994

In the US public concern about investment in the late 1960s and early 1970s centred on three main issues:

- investment in companies supplying arms and other materials for the Vietnam war
- investment in South Africa (see Box 3b)
- consumer interests

Universities and churches were particularly concerned about the first two issues and questioned the morality of investing in companies supplying war materials or directly or indirectly supporting the Apartheid regime in South Africa. The first ever “socially responsible” shareholder resolution in 1969 questioned the morality of Dow’s production of napalm. In 1971, a group of Methodist clergy found that the only way to avoid investments that were associated with the Vietnam war was to set up their own fund. This was called the Pax World Fund and aimed to make a contribution to world peace through investment in companies producing “life-supportive” goods and services. It involved both negative criteria such as avoidance of arms, tobacco and gambling and positive criteria such as fair employment practices, pollution control and international development.

At the same time, consumer activitists such as Ralph Nader who were concerned that big business was ignoring certain consumer interests started to use shareholder pressure as a way of drawing attention to these issues. General Motors, at that time the largest industrial corporation in the US, was the primary target and a number of resolutions on minorities, workers’ rights and consumer interests were offered to submit to shareholders at its 1970 Annual General Meeting.

The Pax World Fund was followed in 1972 by the creation of the Dreyfus Third Century Fund which focused on both environmental and social issues, had no absolute exclusion provisions and based selection on a scoring system. Subsequent funds such as the Calvert Social Investment Fund set up in 1982, and ranking systems such as Franklins Social Assessment Ranking introduced in the late 1970s, emphasised both environmental and ethical or social criteria for screening investments.

Perspectives on Portfolio Investment Flows to Developing Countries

In the 1990s concerns began to be raised about the wider impacts of portfolio investment in the South given the perceived tendency for such capital to be concentrated on resource-based sectors. There was a view that the high returns in emerging markets reflected not just economic fundamentals but also less stringent environmental and social standards. Thus the one UK ethical fund questioned whether the expansion of investment in emerging markets was conducive to sustainable development when the investments were often made in companies with abusive working conditions in extractive industries such as timber, mineral and cash crop production (Jupiter Merlin Research Bulletin 1993).

The issue of accountability has also been highlighted. A typical concern is that while official bilateral or multilateral financing agencies have become increasingly accountable for the wider impacts of the activities they finance in the South, private investors are usually accountable only for the financial outcome of their decisions in terms of rates of return. Their main objective is therefore to move their capital to markets which offer the highest rate of return and the environmental and social impacts of their investment are of little interest (Campanale 1996). This type of concern is commonly expressed about private capital flows in general, but seems particularly relevant to portfolio investment because of its diffuse and often short-term nature. In the case of foreign direct investment it is sometimes argued that concerns about establishment of subsidiary firms in “pollution havens” are misplaced, amongst other reasons, because parent firms can exert control to avoid damage to their international image (Panayotou 1997). In the case of portfolio equity flows the “parent” investors are much less visible and often more transient.

Other typical concerns are that the time horizons involved in portfolio investment may be incompatible with sustainable development of resource-based activities. Korten (1995) argues that the time frames involved in securities markets are too short for productive investments to mature and hence are conducive to "extractive investment" based on liquidation of assets or natural resources. This has parallels with some of the concerns expressed in the economics/finance literature about the perceived short-termism of portfolio investment.

There are also some more positive perspectives on the potential impact of portfolio investment in the South. These take two principal forms. One emphasises the opportunity provided by portfolio investment to direct funds into more sustainable activities. This attitude is exemplified by some ethical and green funds. For example, Jupiter Merlin concluded that "the challenge for green and social investors is not to stop investment into emerging markets but to ensure capital goes to those companies committed to the principle of sustainable development" (Jupiter Merlin 1993). Similarly, Gentry (1997) emphasises that the flows of private capital into local stock exchanges in emerging markets can create opportunities for investment in environmentally efficient companies or those providing environmental services such as water supply and sanitation. He notes that the company which has the concession for sewerage services in Malaysia is listed on the Kuala Lumpur exchange.

The second type of perspective emphasises the possibility of a positive link between environmental performance and financial performance such that it would be directly in investors' interests to consider the wider impacts of their investments. A series of publications sponsored by the World Business Council for Sustainable Development (WBCSD) (Schmidheiny 1992; Schmidheiny and Zorraquin1996; Blum *et al* 1997) explore this issue and place considerable emphasis on the concept of "eco-efficiency" ie achieving environmental improvement while continuing to add value. Schmidheiny and Zorraquin (1996) cite examples of companies where unanticipated environmental problems had marked consequences for their performance in financial markets: Union Carbide and Exxon where the revelation of information about their environmental problems led to falls in share prices, or Ciba which was obliged to spend US$66 million in 1992 on remediation, the estimated effect of which was to reduce its capitalisation by about 5%. Blum et al 1997 examines the link between environmental performance and shareholder value in various company case studies, covering a wide range of sectors, and draws the following conclusion:

"We believe there is sufficient evidence to conclude that, notwithstanding the variety of definitions and measures of the environmental input, the share-value output correlates positively with better environmental management and performance........financial analysts and investors can improve their investment returns by attending to environmental value drivers"

However, the WBCSD publications acknowledge that not all environmental factors lead to improved financial performance. In particular, the case of forestry is examined. As this is based on a renewable resource but with long time spans for renewal, it is argued that there are strong incentives for forest "mining". Companies can obtain higher financial returns from rapid exploitation of forest resources than from restricting themselves to the level of extraction dictated by sustained yield considerations (Schmidheiny and Zorraquin 1996). It is notable also that athough reference is made to social concerns such as poverty, much of the analysis is directed towards the environmental impacts of industrial activity.

A number of studies have attempted to examine the statistical evidence on the link between environmental performance and financial performance and have suggested that there is a positive link. For example, the Investor Responsibility Research Centre (IRRC) in the US compared high pollution portfolios and low pollution portfolios composed of companies in the Standard and Poor 500 index. It found that the low pollution portfolios did not give lower financial returns than the high pollution ones and in many cases performed better. (Delphi International 1997). Such studies have mainly been conducted in the US and Europe and have concentrated on easily quantifiable pollution indicators of environmental performance rather than resource management and biodiversity issues. Also, little attention has been given in these statistical analyses to the social performance of companies, presumably a reflection of the difficulties involved and lack of data. It is unclear how representative such analyses would be of companies in developing countries engaged in natural resource-based activities.

3.3 Harnessing the Potential of Portfolio Investment

As with other types of market, action to influence how portfolio investment operates can be justified if it is aimed at correcting or addressing inherent failures in capital markets. Appropriate responses for tapping into the potential of portfolio investment depends on where the market failures are perceived to be.

The conventional view of capital markets is that provided they are well-established with the necessary insititutional and legal framework in place, they will reflect investor preferences and ensure that investment is directed to where it can generate the highest returns. Investors are primarily seeking to maximise return and minimise risk while companies are competing for funds by offering the highest returns possible. There is often a separation between those who manage a company and those who own it as shareholding tends to be widely spread. However, company management by maximising profit can meet the needs of shareholders, as these are primarily interested in maximising their rate of return.

Types of Market Failure in Capital Markets

The efficient market hypothesis postulates that in an efficient capital market all relevant information will be reflected in the share price of a company. The measure of efficiency is the speed at which the market reflects new information in the share price (Pike and Neale 1996). The issue is what type of information is relevant. As discussed in the previous section there is a growing belief in some quarters that information about the social and environmental performance of a company is relevant to the share price. This implies one type of market failure related to inadequate provision of such information. The argument is that investors primarily concerned with maximising the financial return from their investments are making inaccurate valuations of companies and thus receiving lower than expected returns because of poor understanding of how environmental or social factors affect financial performance.

While the type of market failure identified above refers to investors who are primarily interested in maximising financial returns, a second set of market failures relates to investors who are concerned about the wider impacts of their investments. A number of factors prevent such investors from fully meeting their preferences. Information failure is important in this case but there are other reasons why these typee of investor may be restricted in their choices. These relate to the institutional context of financial markets.

A third type of market failure relates to the externalities of the activity financed rather than to any factors inherent in capital markets. There can be a divergence between the private return to investment and the return to society as a whole because of the environmental and social impact of the activity financed. The benefits to investors are offset by hidden or non-market costs such as environmental degradation, which can affect other groups of society.

To summarise, the following three types of market failure can be identified as relevant to capital markets and sustainable development:

1. Poor investor understanding of how environmental and social performance of a company affect financial returns

2. Barriers to green/ethical investment that prevent concerned investors from meeting their preferences

3. Divergence between the private return to investors and the return to society.

Those who emphasise the first type of market failure see scope for eco-efficient solutions and see little conflict between the goals of maximising financial returns and improving environmental and social performance. The implication is that improving the availability of information about the environmental and social performance of companies will be an effective response. Those who stress the third type of market failure believe that while improved information can help, it will do little to address a fundamental imbalance between private financial returns from investment and the wider costs to society. This view is exemplified by Korten (1995) who claims that environmentally and socially responsible companies that are not externalising every possible cost are often the most vulnerable to takeover bids. Thus, attempts to raise the social and environmental consciousness of company management are misdefining the problem. The issue is not lack of information but that given the characteristics of financial markets and the incentives for corporate raiding, socially conscious managers will find it hard to survive. Addressing the third type of market failure implies using investment as a leverage point to induce companies to internalise more of their externalities.

It is important to examine these types of market failure separately because they raise different issues and imply different policy responses. Much of the concern about portfolio investment has centred on the third type of market failure. Yet, much of the discussion about policy responses had focused on the first type of market failure, emphasising improved information as the main policy solution so that the link between rates of return and environmental and social performance can be made more apparent. The relative importance of these types of market failure may also depend heavily on the characteristics of the sector concerned. In Section 5 we will examine the relevance of these sources of failure in the forest products sector.

Policy Responses

Improving Information on Environmental and Social Performance

The key message of the WBCSD publications is that the wider impacts of company activities will become an increasingly important determinant of financial returns such that it will be directly in shareholders' interests to examine information on the environmental and social track records of the companies they invest in. The main factor which prevents this link from becoming apparent is the inadequate information provided at different levels about the environmental and social performance of companies.

This view is shared by other business groups. In the UK, the Advisory Council on Business and the Environment expresses the view that deeper knowledge of a business's environmental performance would help analysts, fund managers and other key players to form more accurate judgements of its risk profile, prospects and worth (ACBE 1996).

Information can be provided about a company's environmental and social performance in a number of ways. Firstly, it has become increasingly common for companies to publish such information on a voluntary basis in their annual reports or in separate environmental reports. However, these reports do not appear to be providing the information on environmental and social performance that the investment community needs:

- The WBCSD notes that the practice of environmental reporting is confined to a few sectors such as energy, chemicals and transport where there is a clear need for companies to project a better environmental image. It also observes that environmental reporting is rare in some countries, for example Japan (Schmidheiny and Zorraquin 1996).

- The benchmark survey of company environmental reports (CERs) carried out by SustAinability and UNEP in 1996 found that the quality of CERs had improved significantly in comparison with the first survey in 1994. Nevertheless, there were still areas such as benchmarking and quantification where companies were lagging behind. A particular concern is that it is difficult to make comparisons between businesses even within the same sector. Companies are still treating the CERs primarily as public relations vehicles, whereas users are increasingly using them for making comparisons between companies on the basis of performance data (UNEP SustAinability 1996).

- ACBE (1996) note that such reports are apparently little used by any audience and very rarely by the financial sector and that no environmental reports had been tailored to the needs of the financial sector. These observations were based in part on a survey, sponsored by Business in the Environment and Extel, of financial analysts and the extent to which they considered environmental performance of companies in their assessments.

Stock exchange listing requirements constitute another key information point. It is notable that reporting requirements for stock exchanges vary considerably worldwide in their attention to environmental issues and their consideration of different sectors. The general rule is that companies should provide information necessary for investors to make informed decisions. The implication is that details of environmental liabilities should be included but interpretation is variable. Some sectors have more detailed requirements. For example, mineral companies have a separate chapter in the listing rules of the London Stock , but this appears to reflect economic significance rather than environmental concerns.

Requirements for environmental disclosure are perhaps most comprehensive in the US where companies must first be registered with the Securities Exchange Commission (SEC) and adhere to the Securities Act of 1993. Costs of environmental compliance must be reported if they materially affect the financial condition of the business, as well as legal proceedings on environmental matters. Company reports must include a narrative section on material uncertainties and in some cases environmental policies must be stated and explained (ABCE

1996). Some stock exchanges are now introducing more comprehensive environmental disclosure. For example, the Stock Exchange of Thailand has recently made disclosure of environmental performance a requirement for listing (UNDPCSD 1997a).

This disparity in requirements suggests that in some countries including those where the world's most prominent stock exchanges are located, more could be done to oblige companies to make their environmental liabilities more apparent to investors.

Company accounts are another area where environmental and social information could be brought to investors' attention. Accounting regulations generally do not require much attention to environmental issues specifically, but there is considerable variation between countries both in provisions and interpretation. In the UK there are no requirements to report on environmental impacts. In contrast, companies in the US are required by the the Securities Exchange Commission to disclose large environmental exposures in their accounts and to report on environmental expenditures (Schmidheiny and Zorraquin 1996). A number of groups such as ACCA are currently working on proposals for greater integration of environmental concerns into accounting.

Thus, there is evidence to suggest that none of the conventional avenues for providing information on environmental and social performance to investors are very satisfactory at present. There is also considerable variation in reporting requirements imposed by governments and stock exchanges worldwide. This suggests that there may be room for improvement. Nevertheless, there is very little evidence of how the availability of such information affects investor decisions.

Addressing Barriers to Green/Ethical Investment

It could be argued that investors concerned about environmental and social issues can invest in companies that address their concerns or can choose green/ethical investment funds. Under this view there is apparently no justification to attempt to influence portfolio investment as those investors who are concerned about the wider impact of their investments will be adequately catered for. But the ethical fund sector, although it has grown considerably, is still very small. For example, in the UK at the end of 1996, around US$1.6bn was invested in ethical funds compared with a total of US$192 billion in unit trusts and a total UK stock market capitalisation of US$1.4 trillion in 1995 (Paine 1996; IFC 1996). By 1998, the green/ethical fund management subsector, including life assurance and pension funds, was estimated to be worth over £2 billion (US$3.4 billion) (Root 1998). This would suggest that most investors are either not very interested in sustainability or that other factors restrict their choice of investment. In the following sections we examine some of the limiting factors for green/ethical investment.

The Need for Verifiable Environmental and Social Information

One factor discussed in relation to the second type of market failure could also apply here. That is, there is insufficient reliable information about the environmental and social performance of companies. Whereas in the preceding case the need was for information spelling out the financial implications of companies environmental and social performance, for the green/ethical investors there is a further need to be able to monitor compliance with their screening criteria.

Separation between the Investor and Decision-Making

Another factor is the rise of institutional investment, as this creates two levels of investor: the millions of contributors to pension funds, unit trust and other types of institutional scheme; and the fund managers who make the investment decisions on their behalf. Thus investors' preferences for environmental and social performance of the companies they invest in may not be fully reflected in the decisions made by fund managers. Table 3a shows how institutions have increased their share of equities in the UK from around 30% in the early 1960s to over 60% in the 1990s. If overseas investors are included as well (given that the majority of these are US pension funds) the proportion increases to over 75% (Sparkes 1995). The implication is that investment decisions are becoming more concentrated. According to Bain and Band (1996), the top 50 institutions in the UK are estimated to control £400 billion of equity funds or some 45% of total equity.

In the US, pension funds account for about a third of all corporate equities and 40% of corporate bonds (Korten 1995). Mutual funds in the US now number 5,600, accounting for one-third of institutional funds and their assets have increased from US$500 billion in 1985 to US$2.4 trillion in 1995 (World Bank 1996). By way of comparison total equity market capitalisation in the US in 1995 was just under US$7 trillion.

Table 3a: Trends in Institutional Ownership of UK Equities

Type of Owner	% of total equity owned, 31 December			
	1963	**1981**	**1990**	**1993**
Pension funds	6.4	26.7	31.6	34.2
Insurance companies	10.0	20.5	20.4	17.3
Unit trusts	1.3	3.6	6.1	6.6
Banks	1.3	0.3	0.7	0.6
Investment trusts	11.3	6.8	1.6	2.5
Other financial institutions			0.7	0.6
Individuals	54.0	28.2	20.3	17.7
Other personal sector	2.1	2.2	1.9	1.6
Public sector	1.5	3.0	2.0	1.3
Industrial and commercial companies	5.1	5.1	2.8	1.5
Overseas	7.0	3.6	11.8	16.3
Percentage Institutional	**29.0**	**57.6**	**60.4**	**61.2**
Total	100.0	100.0	100.0	100.0

Source: Hargreaves Lansdowne Asset Management in Pike and Neale 1996

Not only have institutional investors grown in importance but they also account for a growing share of the investment flows to developing countries

- By the end of 1994, there were estimated to be 908 emerging market mutual funds in existence worldwide with a net asset value of US$132 billion (IMF 1995).

- Most of these assets were invested in equities and represented 6.5% of total stock market capitalisation in developing countries in 1994 compared with only 2 % in 1990 (IMF 1995)

- In the UK, of the £500 billion invested by UK pension funds, about 1.4% is invested in emerging markets (WM 1997, pers. comm.).

For some types of institutional fund, such as occupational pension funds, persons contributing can have little influence over the composition of the portfolio. In most cases information on the composition is not publicly available and only available in a limited form to scheme members. In the UK, pension funds are required to inform scheme members only of the 20 largest holdings in the funds (NAPFpers comm 1997).

In many cases the degree of flexibility for individual contributors concerned about the social and environmental impact of their investment to redirect their investment to green/ethical funds is limited. This applies particularly to occupational pension schemes and company insurance schemes. Where there is flexibility, transaction costs such as up-front administrative charges may prevent individuals from shifting out of their existing funds. Where individuals are setting up investments for the first time and seeking advice they may not be aware of the choices available. At present in the UK, there is a statutory requirement for independent financial advisers to ask their clients about their risk preferences but this does not extend to their ethical position (Davidson 1997).

The implications of this separation between fund members and fund managers has been widely discussed in the literature, for example in Schmidheiny and Zorraquin (1996). However, the extent of the problem is not clear as little is known about the preferences of institutional scheme members with regard to the environmental and social attributes of their investments. Some ethical/green funds have surveyed the motivations of their members. For example, Friends Provident found that 31% of the investors in their Stewardship funds did so mainly because its criteria reflected their own concerns and that only 5% were motivated primarily by the investment track record (Davidson 1998). However, surveys of the environmental and social preferences of investors in conventional funds or of pension scheme members are more rare.

Restrictions on Institutional Fund Managers

A further widely noted factor is that institutional fund managers operate within a legal context which can restrict the decisions they make. Thus Schmidheiny and Zorraquin (1996) observe that fund managers largely dismiss environmental concerns as being outside their sphere of responsibility and point to their legal requirements to maximise returns on investment as a major constraint. The seriousness of this constraint is illustrated by the "prudent-man" laws in the US which are aimed at protecting small investors. These laws allow beneficiaries to seek damages from a fiduciary who does not invest in their best interest. This applies particularly to banks and also to public and private pension funds but less so to mutual funds where the fiduciary duties of investment managers are less clear. The courts in defining prudence look at assets in isolation rather than as part of a portfolio (Del Guercio 1995?). This impedes investment in companies which promote environmentally or socially desirable objectives but which have relatively low rates of return or represent a higher risk.

Local Authority Pension Funds - One group of institutional investors that may be particularly affected by these financial prudence requirements are state or local authority pension funds. These have significant holdings, in the UK for example, they manage assets of £60 billion or 5% of the shares on the UK stock market (PIRC 1997). It has been argued that local authority pension funds are in a unique position in the investment community because of their wide range of responsibilities for the environment, economic development and social welfare (PIRC 1993?). Given that many local authorities in the UK have formulated local sustainable development plans in response to Agenda 21, some attention to the wider impact of their investments would seem to be consistent with this. For this reason, many local authorities, while not explicitly adopting a green/ethical investment policy, have shown increasing concern about the impact of their investments and have tried to address these concerns in other ways which are discussed later in this section.

The Charity Sector - Charitable organisations in the UK are another group of institutional investor which are affected by restrictions on decision-making. In 1995 the charity sector in the UK held about £25 billion in long-term investments, roughly 20% of the total holdings in unit trusts (Hems and Passey 1996). If religious and educational bodies are included, total assets increase to some £40 billion (Sparkes 1995). Trustees are responsible and liable for their charity's funds, and are expected to obtain the maximum return consistent with financial prudence. Thus, charities typically do not invest in emerging markets because they are perceived as too risky and returns too volatile, thus conflicting with trustees' financial obligations (Seth 1997). But this also means that charities may be constrained in choosing green or ethical investments over investments likely to give higher returns. This financial criterion can be overridden in certain circumstances, for example where certain investments will conflict with the objectives of the charity or would result in a loss of financial support from subscribers. Nevertheless, a degree of uncertainty remains.

A further issue is that many charities opt to invest in pooled investment funds designed by the Charity Commission. These require the widest possible diversification, thus effectively ruling out the exclusion of particular companies on environmental or ethical grounds. These pooled funds have low management charges compared with those of ethical funds, adding a further disincentive to charities to pursue green/ethical investment policies (Hodge 1996).

Addressing the Divergence between the Private Returns of Investment and the Returns to Society

With the third type of market failure, the issue is whether investment is an appropriate leverage point to address environmental and social externalities. The best approach for these types of failure is to address them directly, for example through environmental regulations or economic incentives at local, national or global level depending on the nature of the externality. Returns on investment would thus reflect the impact of these measures and investors' decisions would be affected indirectly. While most countries have some form of environmental and social regulations affecting economic activity, it is widely acknowledged that many costs remain externalised. Regulations may not be stringent enough or not adequately enforced. Where international cooperation is required as in the case of global externalities such as climate change, implementation of measures to internalise environmental costs seems a long way off. The idea of using investment as a more indirect source of leverage to affect company performance seems appealing and could reinforce other consumer-oriented approaches such as product labelling. This use of portfolio investment as a leverage point could, in principle, take three forms, though in practice not all of these may be feasible.

1. Restricting or discouraging investment in activities deemed unacceptable.

2. Encouraging investment in environmentally and socially desirable activities through incentives and tax concessions.

3. Influencing company management and policy through direct shareholder action.

The first two imply action by governments of investor countries, primarily either unilaterally or as part of a multilateral agreement. The second could involve action by governments of both investor countries and recipient countries. The third implies action by shareholders although host country governments may facilitate this or discourage this through the legal and institutional framework it develops for corporate governance. For example, in the US an individual shareholder can put forward a resolution at a company's AGM and the cost of such a resolution is borne by the company. In contrast in the UK the support of 5% of the shares or of 100 shareholders is required before a resolution can be put forward, and the shareholders have to bear the corresponding costs. As a result shareholder action has tended to be more common in the US than in the UK (Sparkes 1995).

Restrictions on Investment

Restrictions imposed by investor country governments on investment overseas have typically been associated with human rights violations and military conflicts and have not to our knowledge been applied on environmental grounds. They have also more typically extended only to investment of the funds directly under the control of the government concerned. For example, in the US, the State of Massachusetts in 1983 prohibited the investment of state funds in companies or banks doing business in South Africa (Sparkes 1995). Attempts to extend such restrictions on investment to cover environmental characteristics would pose enormous challenges of enforcement but perhaps more seriously could raise issues similar to those of "green protectionism". Where importing countries have attempted to impose environmental conditions on the characteristics of the goods concerned, either through regulation or labelling, there has been concern that their motives are protectionist rather than environmental. Much of the problem has stemmed from differences in environmental priorities between importing and exporting countries. It is often claimed that the criteria of labelling schemes reflect the priorities of the importing country but may not be at all appropriate for the producing country.

Attempts by governments to influence portfolio investment so that certain types of operation or activity or country are embargoed or discouraged as recipients of investment funds could be perceived in a similar fashion. That is, as Northern countries imposing their own set of environmental and social priorities on Southern countries while withholding access to finance which would promote types of development deemed acceptable by the Southern government concerned. It is possible that such efforts to influence investment could deprive developing countries of important sources of capital - if investors shift to more acceptable locations or avoid certain activities altogether. It is significant that few green/ethical funds invest in emerging markets and most are developed country focused. In the US, more than 97% of the portfolios of socially motivated capital funds have been invested in Northern companies up to 1996 (Feigenbaum 1996). Similarly, a survey of ethical and environmental funds in Continental Europe carried out in the early 1990s found that very few had holdings outside of the OECD (Campanale *et al* 1993).The fact that green/ethical funds have so far not been subject to criticisms for investing so little in the South reflects their relatively small share of the investment market. If this share were to increase significantly it is possible that more concerns would be raised.

An alternative view is that such measures could support developing country governments in their efforts to enforce environmental and social regulations. If companies are excluded from financial markets because they are known to be violating government regulations, or, conversely, if those that can demonstrate compliance are favoured in some way, then this could be a valuable source of support for enforcement. It is often difficult, however, to establish the compliance record of companies in countries where enforcement is weak, and the environmental and social priorities of Northern investors and Southern governments may not always coincide.

Promoting Desirable Investments

Investment is normally subject to a range of taxes, for example, dividend taxes and capital gains taxes but numerous concessions apply for specific types of investor provided they meet certain conditions. These have been introduced to meet a variety of objectives:

- to promote technological innovation and facilitate the access of small and newly formed companies to equity finance, for example, the capital gains tax concessions on venture capital trusts in the UK;
- to encourage personal savings, for example, the tax-free status of personal equity plans in the UK;
- to prevent exposure of certain types of investor to risky investments, for example the requirement that Personal Equity Plans must have a certain percentage of their holdings in European companies;
- to promote longer-term investments, for example, the reduction on capital gains tax in the US if investments are held for longer than a year (ref?).

There is scope therefore for applying similar concessions to investments in companies with "acceptable" environmental and social performance. Such companies can be considered innovative though not necessarily in a technological way. It would be necessary though to establish what is meant by "acceptable" performance.

The access of companies to capital markets is also affected by the stringency of requirements for listing. These generally require details of financial records and trading history and thus tend to discriminate against newly established companies. In some countries, special provisions are made to encourage small or developing companies to offer shares to the public. In London, the Alternative Investment Market (AIM) was set up in 1995 following the model of NASDAQ in the US. The AIM has simpler rules and application procedures than the main stock exchange and thus keeps the costs of entry and membership as low as possible (Pike and Neale 1996). Companies do not need to have reached a particular size or demonstrate a lengthy trading history, nor are they required to have a certain percentage of their shares in public hands (LSE 1995). This model is being considered by other countries. For example, Malaysia is setting up an alternative exchange called MESDAQ to target high-technology companies (LSE 1997).

While the aim of these alternative stock exchanges has been to encourage small or new businesses, a similar type of institution could be developed to promote environmental or social goals. A Green/Ethical Stock Exchange could be established to facilitate the access of green/ethical companies to equity finance. This would have less stringent requirements for companies in relation to size and trading history but would require more information about their environmental and social performance.

Influencing Company Management through Shareholder Action

Influencing new companies through simpler listing requirements is only part of the problem and arguably the challenge is to address the externalities of existing companies. A more effective leverage point may therefore be for shareholders to pressure existing companies to improve their environmental and social performance. Shareholder action has also been seen as a way of improving the performance of management and hence financial returns. Bain and Band (1996) advocate greater involvement of institutional investors in the management of the companies they invest in, but primarily as a means to improve financial performance. Similarly, in the US, the United Shareholders Association (USA) which operated from 1986 to 1993 aimed to provide a means for small shareholders to monitor financial performance. According to Strickland *et al* (1996), the USA was highly successful in improving the governance structure of large US corporations and enhancing shareholder wealth.

There are numerous examples of shareholder action being used to promote environmental and social goals. In the US in 1989, the Coalition for Enviromentally Responsible Economies (CERES) was set up to bring together institutional investors, such as the public pension funds of New York City and California, with environmental groups. The aim was to encourage companies to adopt a positive environmental ethic by signing up to a set of principles which would integrate environmental concerns into their planning and reporting (Massie 1996). The coalition member organisations together represent more than 10 million people and over $150 billion in invested assets.

In the UK a similar organisation, Pensions and Investment Research Consultants (PIRC), coordinates shareholder action campaigns on behalf of its clients, mainly local authority pension funds. It argues that institutional investors must be accountable to the wider community whose savings they hold on trust, and that their responsibilities and interests stretch far beyond short-term financial targets (PIRC undated). In 1991 PIRC introduced an environmental code that its investor clients could call on companies to adopt. This has since been backed by a number of local authority pension funds in the UK. PIRC also worked with Greenpeace and Friends of the Earth on a shareholder campaign directed at Fisons, which at the time was engaged in peat extraction (Sparkes 1995). More recently, it coordinated an investor campaign to question the policies of Shell in its Nigerian operations (Guardian 1997). Some indication of the level of interest of pension funds in the wider impact of their investment is given by the client base of PIRC. It advises local authority pension funds with £18 billion of investments as well as private sector funds of £16 billion (Sparkes 1995). Together, these constitute some 7% of total pension funds in the UK.

4. Links Between Portfolio Investment And Unsustainable Prices Of Forest Products Companies

Much of the concern about about the impact of portfolio investment has centred on resource-based industries and in particular on forest resources. The listing of Barito Pacific on the Jakarta Stock Exchange in 1993 stimulated a campaign involving NGOs worldwide to dissuade institutional investors in Europe, USA and Indonesia from purchasing shares in the company. They were concerned that the proposed expansion of the company was not in the interests of the environment, or local and indigenous people and, in the longer term, the process of sustainable development of the Indonesian economy (Forest Monitor 1993). They argued that more investment in unsound logging practices was not needed.

A review of forest products companies by the Environmental Investigation Agency is concerned that stock exchange listing for companies such as Rimbunan Hijau provides access to capital for further expansion (EIA 1996). WWF has also raised concerns about the role of institutional investors and pension funds in particular in funding timber companies with poor environmental and social performance (Dudley et al 1995). Campanale (1996) goes further in suggesting that because UK and US institutions expect high returns on their investments in risky emerging markets, this might be a factor affecting the behaviour of the logging companies on the ground. Western institutional shareholders could to some extent be blamed for the behaviour of the logging companies in which they invest .

In this section we examine the evidence for these concerns focusing in particular on the forest products sector in Malaysia. This poses some serious challenges. First, there is very little systematic data at sectoral level about portfolio investment flows. Second, there are no routine systems in place to assess the quality of forest management in different locations. While it is clear that poor practice is widespread, reports on unsustainable practices in particular locations or by specific companies are rarely the result of independent assessments based on agreed criteria. Definitions of sustainable practice also vary widely and depend on local interpretation, although some common elements can be identified in the different initiatives that have established principles and criteria for sustainable forest management (Nussbaum *et al* 1996).

Given these difficulties, we confine ourselves to three sets of related questions:

1. What is the magnitude of portfolio investment flows to the forest products sector in Malaysia and how much of it comes from OECD sources?

2. How dependent are such companies on foreign portfolio investment as a source of finance and what advantages does listing have besides access to finance?

3. Are there cases where listed tropical timber companies have been the subject of criticism from governments, NGOs and international agencies for alleged unsustainable practices? To what extent can financing be traced to OECD sources?

4.1 The Magnitude of Portfolio Investment Flows to the Forest Products Sector

Statistics on portfolio investment are not systematically broken down by sector, and available figures are rather fragmented. The IMF (1995) provides a sectoral breakdown for equity and bond issues in developing countries over the period 1991-1994 and it is notable that forestry is not given a separate classification but is included within "other" which accounts for 30% in the case of equities and roughly 9% in the case of bonds. The most significant sectors for equity issues are telecommunications, public utilities, coal, gas and oil and the financial sector. This reflects the contribution of privatisation to the growth of portfolio investment. Crossley *et al* (1996) have estimated that annual private capital flows to the forestry sector in developing countries are in billions of US dollars and have provided some statistics as an illustration of the trends involved:

- In China, an investment of over US$300 million of foreign capital was planned over the period 1996 to 2000.

- In the former Soviet Union, US$5 billion of OPIC guaranteed US investment was expected over the period 1996-2001.

- In Papua New Guinea, Malaysian timber companies invested over US$509 million in the forestry sector between 1991 and 1996.

- Billions of dollars of foreign capital are being invested in paper, plywood and medium density fibreboard plants in Southern Asia and South America.

It is not clear how much of this is direct investment and how much is portfolio investment. To provide some indication of the relative importance of portfolio investment from different regions for the forestry sector in emerging economies, we have collected detailed information from Malaysia as this is one of the major producers of tropical timber products. Information was obtained directly from company reports, from Bloombergs and Extel and from bookrunners. For a number of reasons the information presented gives only an approximate indication of investment flows:

- Not all forest product companies responded to requests for annual reports.

- Companies may have several activities and may not be classified by the Kuala Lumpur Stock Exchange as forest products companies. While efforts were made to identify companies with timber activities, some companies may have been overlooked.

- In many cases, shares are held by nominee companies on behalf of foreign and domestic investors. Nominee companies are legally obliged to protect the identity of investors.

- Some types of foreign institutional investors, pension funds in particular, may not be included in the listings obtained. The numbers derived are therefore likely to underestimate the total value of investment.

Nevertheless, the estimates show that institutional portfolio investment has been playing an increasingly important role in the forest products sector in Malaysia, and that institutional holdings in certain companies can be quite significant.

Listed Companies and Market Capitalisation

The market capitalisation of timber companies listed on the Kuala Lumpur Stock Exchange has been estimated for the years 1992-1996 (Table 4a). These include all listed companies which were found to derive some or all of their earnings from the forest products sector.

Table 4a Shares outstanding and market capitalisation of timber companies quoted on the KLSE 1992-1996

Year	***1992***	***1993***	***1994***	***991995***	***1996***
No listed companies on the KLSE	369	410	441	515	591
No. listed timber companies	13	20	25	33	36
No. of shares outstanding (billion)	1.28	2.38	3.91	5.95	7.4
Market capitalisation of listed timber companies (RM billion)	2.09	16.03	24.95	25.75	39.97
Market capitalisation of timber companies as percentage of total KLSE capitalisation			5.1	4.7	8.2

Source: Estimated from data in company reports, broker reports, Bloomberg and Extel

Between 1992 and 1996, the number of timber companies listed on the Kuala Lumpur Stock Exchange has nearly trebled compared to a growth of 60% in the total number of listed companies on the exchange. Market capitalisation of this sector increased by over 1800% in this period such that by 1996, timber companies, defined broadly as explained above, accounted for over 8%of the market capitalisation of the Kuala Lumpur stock exchange.

In 1996, of the 36 listed timber companies, 18 derived most or all of their earnings from forestry activities and a further 3 obtained more than 50%. Table 4b gives further details.

Table 4b Percentage of Earnings Derived from Forest Products

100%	**50-99%**	**30-49%**	**<30%**	**Not Specified**
Aokam Perdana	Glenealy	Advance Synergy	Batu Kawan	Berjaya Group
BTM	Lingui	Granite Industries	Ekran	C.A.S.H
CHG	Mentiga	Idris Hydraulic	Innovest	Damansara
Evermaster		Pan Global	Kumpulan Emas	North Borneo
Foreswood		Sindora	Land and General	Parit Perak
Golden Pharos				
Jaya Tiasa				
KP Keningau				
Long Huat				
MGR				
Minho				
Pacific Chemicals				
Pan Pacific Asia				
Seal Inc				
Sinora				
Tekala				
Timbermaster				
U-Wood				

Source: Company annual reports, Extel and Bloomberg

Regional Distribution of Shareholdings

For a number of reasons, it is difficult to obtain information on the regional distribution of share ownership. A company's annual report will normally contain information on the 20 major shareholders. However, for many listed Malaysian timber companies, most of the top 20 shareholders are nominee companies. These are institutions which hold shares on behalf of investors, and pass on dividends to them. They provide a vehicle through which shares can be bought or sold by foreign investors where these are not eligible to buy securities directly or to allow an investor to remain anonymous. These companies are legally obliged to protect the identity of investors. Similarly, companies have a list of shareholders to whom they pay dividends, but they are under no obligation to make this publicly available. Another source of information is the bookrunner responsible for the placement of a new bond or equity issue for a timber company. They have information on subscribers to issues but are generally unwilling to make it available to the public.

Nevertheless, through requests to bookrunners, nominee companies and the timber companies themselves, we were able to obtain an approximate regional breakdown of investment for eight companies (Table 4c).

Table 4c: Regional Breakdown of Shareholdings in Selected Malaysian Timber Companies (% of Shares Outstanding 1996/7)

	Malaysia	Hong Kong	Singapore	Indonesia	US	Other Asian	Europe	Others	Foreign
CHG	97.86	0.03	1.98	0.01	0.1			0.02	
Damansara	93.77		5.4		0.11	0.68	0.03	0.01	
Glenealy	78.98								21.02
Innovest	98.8	1.2							
Lingui	68.82	31.18							
Mentiga	98.59	0.13	1.23	0.03	0.01			0.01	
MGR	85.0				0.07	14.92	0.01		
Mechmar	90.86		5.69				0.02	3.43	

Source: IIED estimates from information supplied by bookrunners, nominee companies and timber companies

This breakdown suggests that European and North American sources of capital are not particularly significant for the timber companies listed above. But these figures need to be interpreted with caution for two reasons. First, these figures may not show indirect investment for example, where Asian funds which invest in the companies concerned are partly financed from OECD sources. Second, these holdings need to be considered in relation to the value of free capital in each company rather than the total market capitalisation[4]. Thus, a regional breakdown for a new equity issue by Aokam Perdana Berhad provided by one bookrunner gives a somewhat different picture:

- 41% Europe
- 36% Asia
- 23% United States

An alternative way of examining the regional breakdown of investment in Malaysian timber companies is to obtain data on holdings of institutional investors from different countries. In 1996, at least 462 institutional investment funds had holdings in Malaysian timber companies or had recently divested. These funds were mostly mutual funds and represented 201 different institutions from Europe and North America mainly but also some from Japan, Taiwan and Malaysia. The total market value was RM 1.3 billion representing 3.26% of total market capitalisation for Malaysian timber companies in 1996[5]. This figure would tend to underestimate the full amount held by institutional investors as it does not take full account of the direct holdings of pension funds or insurance companies. It may also be lower than in previous years because portfolio investment flows to emerging economies, as discussed in Section 2, declined sharply after 1994.

The definition of timber companies also affects the result. If timber companies are defined more narrowly to exclude any companies with less than 30% of turnover derived from the forest products sector the percentage of market capitalisation held by institutions drops to 1.94 and the value of their holdings to RM 0.5 billion.

[4] A high proportion of shares may be held by directors and thus not traded frequently.
[5] This does not include institutional holdings of companies listed in 1996 (Sindora, Sinora, Tekala, BTM Resources and KP Keningau) as information was not yet available.

More detailed analysis of these holdings reveals considerable variation in the number of funds investing in different companies and in the size of the holdings. In 1996, 176 institutional funds had holdings in the company Land and General Bhd and held 16.5% of its shares. Institutional funds also had relatively large holdings in Ekran Bhd, Aokam Perdana Bhd, Jaya Tiasa Bhd and Kumpulan Emas Bhd. Table 4d gives more details. It can be seen that high percentage holdings generally reflects involvement of a large number of funds but there is an important exception. Just three funds between them held 4.2% of Kumpulan Emas in 1996. It is also noticeable that the two companies (Land and General Bhd and Ekran Bhd for which institutional holdings have been extremely high both in absolute and relative terms, derive only a small proportion of their earnings from forest products.

Table 4d Institutional Holdings in Selected Malaysian Timber Companies

Company	**Number of Institutional Funds with Holdings**	**Total Institutional Holdings RM Mn**	**Mkt Capitalisation RM Mn**	**Institutional Holdings as % of Mkt Cap.**
Land and General	176	14.20	1,337.65	16.52
Ekran	85	380.33	2,751.40	13.82
Aokam Perdana	37	63.16	846.23	7.46
Jaya Tiasa	65	202.92	3,552.33	5.71
Kumpulan Emas	3	2.4	56.91	4.23
Lingui	32	74.44	2,950.00	2.52
Berjaya Group	24	29.46	1,416.00	2.08
Advance Synergy	6	14.20	1,337.65	1.06
Innovest	?	22.44	2,986.80	0.75
Idris Hydraulic	17	8.19	1,870.30	0.44
CHG	2	0.41	220.11	0.19

Source: Estimated from data in company reports, broker reports and Bloomberg

It is also important to consider the market value of institutional holdings in relation to the value of free capital[6] of Malaysian timber companies rather than their total market capitalisation. Free capital in many cases represents less than 50% of the total market capitalisation of Malaysian timber companies. This is demonstrated in Table 4e which presents estimates of the holdings of directors and major shareholders in a number of companies. Thus, the institutional holdings in Jaya Tiasa, already quite significant at 5.71% of market capitalisation should be assessed in the context of holdings by substantial shareholders of 57% leaving less than 50% as available free capital.

[6] . Free capital refers to shares which are frequently traded and are not part of holdings of company directors or major shareholders who are likely to retain their shares for long periods

Table 4e: Holdings by Directors and Substantial Shareholders in Selected Malaysian Timber Companies

Company	Percentage holding of Directors[1]		Percentage holding of susbstantial shareholders[1]
	Direct	Indirect[2]	
Advance Synergy	-	13.5	-
Aokam Perdana	-	-	18.5
BTM	-	80.7	68.6
CHG	2.4	97.8	33.6
Foreswood Group	0.2	68.9	90.2
Glenealy	-	52.4	68.3
Golden Pharos	-	-	56.9
Granite Industries	26.1	11.6	18.9
Idris Hydraulic	-	-	45.0
Jaya Tiasa	-	-	57.0
KP Keningau	45.7	70.8	58.8
Lingui	0.5	44.9	50.3
Long Huat	0.9	6.6	32.4
Mentiga	7.9	14.1	60.8
MGR Corporation	8.0	-	28.1
Minho	3.7	70.0	46.1
North Borneo Timbers	-	-	9.3
Pan Global	5.1	-	41.2
Pan Pacific Asia	39.4	-	29.5
Seal Inc	0.6	-	-
Sindora	0.1	0.1	84.7
Tekala	16.9	29.8	33.0
Timbermaster Industries	10.3	0.04	60.1
U-Wood Holdings	0.8	6.7	3.1

Source: Estimated from company reports 1996/97

[1] Holdings of directors' and substantial shareholders can overlap and are therefore not additive
[2] Indirect refers to holdings in other companies that own shares in the company

The Importance of Equity Finance for Company Expansion

Free capital is particularly important where companies frequently resort to equity issues for expansionary purposes. Available data suggests that there has been a relatively large number of equity issues made by Malaysian timber companies. Table 4f shows that there has been an increase in the number of equity issues by timber companies listed on the KLSE and that 89 issues were made in total over the period 1992 to 1996.

Table 4f: Equity issues by timber companies quoted on the KLSE, 1992-1996

Year	***1992***	***1993***	***1994***	***1995***	***1996***
No. equity issues	9	20	18	18	24
Issue amount (RM million)*	103	823	1,207	2,651	1,131

Source: KLSE

All figures are approximate.
**These figures do not capture all the amounts of rights issues.*

Many of these companies also have non-timber related activities and thus not all the issue amount indicated in Table 4g will be for investment in timber operations (although issue amounts for clearly non-timber activities were omitted).

Land and General Bhd accounted for 15 of these, followed by Aokam Perdana Bhd with nine, and Lingui Developments Bhd with six.

Recent developments and future prospects

The forest products sector is a cyclical industry and its performance is closely linked to global economic conditions. In 1993, timber prices doubled over 12 months owing to a shortage of logs and high demand. The Kuala Lumpur stock market index went up by 98%, and some of the most actively traded stocks were timber associated (Financial Times 1994). But the following year there was a downturn in the demand for forest products from the region. This was prompted by the economic slowdown in Japan (which is one of the main customers for wood products from Malaysia and other parts of Asia) and China (which is becoming a major buyer of timber products, particularly paper and paperboard, plywood and sawn timber) (Credit Lyonnais Securities, 1995).

After 1994, some investors left the sector, or became less active and some broker houses stopped producing comprehensive reports on the timber sector, e.g. HG Asia. The main complaints of the investors and research analysts interviewed in 1996 focused on the following factors:

- low expected returns coupled with high volatility
- the relatively small amount of traded shares and lack of liquidity
- the lack of readily available and reliable information on timber companies
- a lack of management credibility in some timber companies
- lack of independent verification when valuing, as this potentially leads to timber companies overstating the value.

However, some research analysts were expecting gradual recovery in the sector, and were optimistic that in the long-term timber commodity prices would continue to rise at least until suitable substitutes were found.

4.2 How Important is Portfolio Investment to Malaysian Timber Companies?

Relatively few Malaysian timber companies are listed on a stock exchange and have access to international capital markets, and there are many more private timber firms in Malaysia than listed ones. Of the five major timber groups in Sarawak: Rimbunan Hijau, Samling, WTK, KTS Timber: Shipping: Trading, and Shin Yang, only the first two currently have listed companies within their group. However, the seems to be for these larger companies to seek listing or to acquire listed subsidiaries as shown in Box 4a.

Box 4a Links between Private and Listed Companies

Private Company	Listed Vehicle
Rimbunan Hijau	Owns 57% of Jaya Tiasa Holdings Berhad.
Samling Corporation	Owns 43.5% of Lingui Developments Berhad which owns 36.8% of Glenealy Plantations (M) Berhad
WTK S/B	Unsuccessful attempt to acquire Samanda Holdings Berhad
	Attempted reverse takeover of Parit Perak

Source: WI Carr 1997

Listing provides new financing possibilities, and enables companies to expand their operations, such as acquiring a concession or developing downstream processing capacity (Campanale 1996). The opportunities provided by listing on a stock exchange were described in the Chairman's Statement of the 1996 Sindora annual report:

> Public listing provides an opportunity for the Malaysian investing public and bumiputera[7] investors to participate in the equity and in the continuing growth of the Group together with eligible directors and employees. It will also enable the Group to gain wider access to the capital market to raise funds for expansion, diversification, modernization, and in seizing opportunities for future growth.

While some companies use the opportunity to raise money to finance the expansion of timber activities, there may be other advantages to listing. Private timber companies, such as Samling Corporation and Rimbunan Hijau, have significantly greater financial resources than most listed timber companies and probably are not in need of equity funds for expansion. However, through reverse takeovers they have acquired large holdings in listed companies that are engaged in timber processing. Through these listed vehicles they can gain tax advantages as while logging profits are subject to tax at the full rate, downstream processing activities receive tax concessions (Barings 1994). In 1995, 50% of Samling's assets were still held privately but it stated its intention to list all of its timber subsidiary companies within the following three years. It is notable that it did not intend to issue equity for this purpose as it did not want to reduce its stake in these companies (CLSA 1995). This suggests that the motives for listing sometimes have less to do with the need for additional finance than with other advantages such as tax concessions. Box 4b gives further details on the tax advantages of listing using Jaya Tiasa as an example.

Box 4b Tax Advantages of Listing

Rimbunan Hijau which is the largest concession holder in Sarawak (around 4.5 million acres), effectively owns about 70% of the listed company Jaya Tiasa. The latter has been receiving discounts of 15-20% on the timber from Rimbunan Hijau, as well as access to its concessions. In 1996, Jaya Tiasa Holdings Berhad announced the proposed acquisition of 1.8 million acres of timber concessions in Kapit Division in Sarawak (of which about 50% is classified as virgin area) for RM566 million via an equity issue. By injecting its timber concessions into Jaya Tiasa, Rimbunan Hijau would enjoy direct tax savings since Jaya Tiasa's plywood operations enjoy pioneer status and thus qualify for tax concessions. Rimbunan Hijau would otherwise have to pay the full 30% corporate tax for timber sold to Jaya Tiasa for its downstream activities.

[7] Indigenous Malaysian

Source: CLSA 1996.

Timber companies have funded only part of their expansionary activities via new equity and bond issues. For example, Idris Hydraulic Berhad purchased the 475,000-acre Sagisan concession in Sabah in 1993 for M$130 m (M$60 million in cash and M$70 million debt) (G.K.Goh 1994). Similarly, Glenealy Plantations financed the acquisition of Hikurangi Forest Farms Ltd in New Zealand through bank loans and internal funds (W.I.Carr 1996). There are examples however, where companies have issued equity specifically for the purpose of acquiring a concession or a processing operation in Malaysia or to acquire concessions overseas (see Box 4c).

Box 4c Equity Issues for the Purpose of Acquiring Concessions and Processing Operations

Acquisition of Concessions in Malaysia
The acquisition of Usama Industries S/B for RM200 m by Pacific Chemicals Bhd in July 1993 was satisfied by the issue of 47.5m new shares and a cash payment of RM10m. Usama Industries S/B owns three concessions in Sarawak. Pacific Chemicals is involved in the trading of logs and the production of sawn timber. Usama holds the timber rights over an area of 335,035 acres in the Kapit Division of Sarawak, and also operates a sawmill with a production capacity of 62,400 hoppus tonnes annually. On the basis of its current extraction rates (which are determined by sustainable yield), the life span of the concession is expected to last until around 2013 (CLSA 1995).

CHG Industries Bhd acquired Syarikat Galas Setia (Ulu Kelanatan) S/B which owns a 20,000-acre timber concession in Kelantan in 1994 for a total consideration of RM34m satisfied by an equity issue of RM 30m and a cash payment of RM4.0 m (Barings 1994).

In April 1996, Golden Pharos Berhad raised RM 430,000,000 via the issue of 66,153,846 shares to acquire Permint Timber Corporation via an equity issue. Permint Timber Corporation owns a 129,000 hectare timber concession with an estimated yield of 180,000 m3 pa for 5 years, and plywood and moulding operation from Terengannu State Government. The Terengannu State Government will emerge as a 57% shareholder (ref?).

In May 1995, Glenealy Plantations (M) Berhad raised RM 292,000,000 via the issue of 41,714,286 shares to acquire Samling Plywood (Baramas) S/B. The subsidiary has a 417,510 acre Sarawak timber concession which expires in August 2013, and a 120,000 m^3 capacity plant for plywood/veneer.

In June 1995, Pan Global Berhad raised RM 220,999,999 via the issue of 48,043,478 shares to acquire Limbang Trading which has rights to a timber concession in Sarawak.

Acquisition of Concessions Overseas
Kumpulan Emas purchased China International Products Limited (CIPL) for approximately RM335m paid for in part by a rights issue in 1994 of RM 316.6 m (which was used to repay the bank borrowings and bridging loan taken to acquire CIPL). CIPL, renamed Emas Pacific Ltd (EPL), is an investment holding company with interests in four companies which hold concessions to fell and extract timber in the Solomon Islands (Kumpulan Emas 1994).

In June 1994, Damansara Realty Berhad issued 94,000,000 shares for an issue amount of RM 94,000,000 to acquire Damansara Forest Products (PNG) S/B. The subsidiary has an aggregate of approximately 10,000 ha of concession area in the Pai and Bat regions in Papua New Guinea (ref?).

Acquisition of Processing Operations
In March 1995, Jaya Tiasa Holdings Berhad acquired 100% of JT Plywood S/B for RM730 million which was satisfied by an equity issue of 182,500,000 shares. It also bought Rimbunan Hijau Plywood S/B for RM107 million with cash.

In November 1994, Lingui Developments Berhad issued 84,000,000 shares to raise RM 672,000,000 for the acquisition of 113,000,000 units of Samling Plywood (Bintulu) S/B for RM 452,000,000, and 55,000,000 units of Tamex Timber S/B for RG 220,000,000.

In March 1991, Construction and Supplies House Berhad acquired United Plywood and Sawmill S/B via the issue of 37,484,210 shares. In October 1995, receivers were appointed to manage United Plywoods and Sawmills S/B's assets and undertakings with effect from 4 October 1995. In March 1996, the company’s shareholders approved of the disposal of 3,661,000 shares in United Plywood and Sawmill S/B to Model Tebrau (M) S/B for M$20 million.

4.3 Is Portfolio Investment Financing Companies with Poor Environmental and Social Performance?

There has been much criticism of forest management in many countries of the world both temperate and tropical. Much of the criticism is general and does not identify specific companies or distinguish between different types of company such as private and listed. Considerable concern has been expressed by NGOs about illegal logging in excess of allowable cut or in areas subject to restrictions, and centres both on practices that violate government regulations, such as logging in excess of the allowable cut, and on those that are legal but involve environmental and social impact.

Many of the alleged cases of environmental and social mismanagement concern unlisted companies, such as Rimbunan Hijau (Malaysia's largest timber company), Samling Corporation Sendirian Berhad (S/B), and WTK S/B, thus suggesting that availability of overseas equity finance is not a crucial factor. However, as discussed in the previous section some of these unlisted companies have acquired listed companies and the distinction between the two types of company is thus somewhat tenuous.

Concerns about Activities of Timber Companies in Malaysia

Regulations on forest management have become more strict in Malaysia in recent years and concerns over the operation of timber companies have started to focus more on their offshore activities.

Nevertheless, concerns have been raised by NGOs about timber companies involved in logging the catchment area of the Bakun Dam. These include private companies such as WTK S/B, KTS S/B and Shing Yang, and companies such as Rimbunan Hijau and Samling Corporation S/B with listed subsidiaries. According to various environmental impact assessment reports, the catchment area under licence will be logged out in approximately 11 years. Catchment management is important for the technical and economic performance of the Bakun dam and some NGOs believe that unless a "no logging" policy is introduced in the catchment area, the dam is likely to face serious operational problems from environmental factors, such as sedimentation (FoE, 1996). In their field surveys, SAM (Malaysian Friends of the Earth) officials have already noticed the environmental destruction that accompanies the logging activities of the companies involved in logging in the catchment area. For example, they claim that logging roads were built on steep slopes without mitigation measures. As a result there were massive slope collapses and landslips as well as soil erosion and heavy sedimentation in many rivers and streams. On the other hand, Aylward *et al* (in press?) find that the off-site impacts of logging upland forests in Malaysia may be modest and short-lived.

Investment analysts have also been concerned that logging was not being conducted on a sustained yield basis in some concessions. In their 1993 research report on Aokam Perdana, Phileo Peregrine noted that "the currently rapid felling rates at Sagisan would appear to fall short of the ideal 60-year sustainable cycle for tropical hardwoods". In fact, Phileo Peregrine calculated that Aokam was logging the Sagisan concession on a 12-15 year cycle.

Listed Companies and Offshore Expansion

Companies have been criticised for their offshore activities particularly where these imply moving to countries with less stringent regulations or less effective enforcement. For example, WWF (1996) has claimed that timber companies move abroad in search of abundant and cheaper wood sources because resources in their own countries are becoming scarce, environmental legislation is being introduced and enforced, and costs of timber production are rising as governments increase royalty taxes. While some observers might consider this to be an acceptable way for companies to seek to reduce costs provided they are not acting illegally, others take the view that such companies are taking unfair advantage of weak governance in the host countries.

Expansion in Asia and the Pacific

Table 4g gives some examples of listed companies and their offshore concessions. In some cases this expansion has been financed by equity and bond issues. For example, Kumpulan Emas Bhd acquired China International Products Limited (CIPL) in the Solomon Islands in 1994 through a rights issue. CIPL owns four subsidiaries, some of which have been accused of environmental mismanagement (see Box 4d for more details).

Table 4g: Offshore Expansion of Malaysian Listed Timber Companies

Listed company	*Overseas venture*	*Concessions size (ha)*	*Yield (m3/ha)*
Advance Synergy	PNG	500,000	60
Berjaya Group (?)	Solomon Islands	640,000	80
CASH (stake in Barito Pacific)*	Indonesia	2,900,000	60
Damansara Realty	PNG	105,000	80
Land & General	PNG	200,000	60
U-Wood*	Vanuatu	140,000	60
Kumpulan Emas**	Solomon Islands	460,000	85

Source: KLSE & CLSA 1995[i]

**Failed acquisition, ** In 1996 these were written off.*

Box 4d: Concerns about the Activities of Kumpulan Emas in the Solomon Islands

In October 1993, Kumpulan Emas acquired China International Forest Products (CIFP) which owned four Solomon Island logging companies: Isabel Timber Company, Integrated Forest Industries, Rural Industries, and Silvania Products (SI) Ltd (SPL). SPL has had its logging license suspended on numerous occasions since 1993, due to the excessive production of low grade logs and failure to construct roads to a satisfactory standard in advance of felling operations. In August 1993 the National Forest Resources Inventory accused SPL's operations of being akin to clearfelling in the excessive degree of canopy removal and soil disturbance (Forests Monitor, 1996). In its 1996 annual report, SPL blamed its loss of revenue on environmentalists: "It is our opinion that the unwelcome attention accorded SPL as mentioned earlier, was the result of outside political and environmentalist pressure causing disruptions in our operations."

Rimbunan Hijau, WTK and Samling appear to be the Malaysian timber companies most active in expansion overseas. Rimbunan Hijau has been subject to much criticism for its operations in Papua New Guinea (PNG). In part, this criticism reflects a concern that the company was monopolising PNG's log export market and deriving an unfair share of export revenues. For example, Malaysian Friends of the Earth (SAM) cite non-governmental organisations NGOs as having assessed that Rimbunan Hijau is responsible for approximately 80% of all PNG log exports. The PNG Government was also concerned about Rimbunan Hijau's monopoly position and concluded that it was using its connnections to block the implementation of new forestry guidelines (Filer 1997). However, the figures on the extent of Rimbunan Hijau's control were not substantiated by reference to government statistics. Filer (1997) has concluded that while Rimbunan Hijau is a dominant player in PNG's log export industry, with a 50% share, this does not constitute a monopoly or anything other than a standard form of capital concentration in a resource extraction industry. There are a number of instances, though, in which Rimbunan Hijau's subsidiary companies in PNG such as Pacific Logging and Niugini Lumber have been found to be violating environmental regulations (DEC 1993 cited in EIA 1996; Majid Cooke 1997; Filer *op cit*). In addition, the World Bank found that all current forest operations in PNG were operating at well above sustainable logging levels for concession areas (Douglas and Magrath 1996).

Other criticisms have been made of the activities of Samling and other private Malaysian timber companies operating in Cambodia (see Box 4b). The nature of the relationship between the private company and its listed vehicle is therefore important in determining the link between these reports of poor environmental and social performance and foreign portfolio investment.

Box 4b Concerns about Malaysian Timber Companies in Cambodia

As of February 1996, the timber rights from 21% (3,920,286 ha) of Cambodia's total land area had been sold to foreign companies, with a further 10% (1,930,519 ha) in the pipeline. Malaysian companies which have been granted forest concessions include Double Ace, SL International (Samling), Geometric Holdings, Grand Atlantic, and Super Wood. Concessionaires, such as Samling Corporation S/B, were revealed as exerting tight control over their concessions, employing foreign guards to protect their interests, and not allowing local people to cut the wood for fuel and other purposes. Saw mills for local use were also closed down. In 1995, ethnic minorities in Ratanakiri in Cambodia were forcibly removed from their traditional land at gun-point by Malaysian plantation companies. Villagers were employed by one company to clear their own land of trees. The labourers were not only made to operate in poor conditions, and subjected to beatings and threats, but the Company left still owing the workers one month's wages.

Source: Global Witness 1996

Expansion in Latin America

In Brazil, according to newspaper reports, Asian companies have bought small-scale, often bankrupt, local timber companies which already have forest management plans (PMFs) approved by Ibama, the government's environmental agency. Again, these are both private and listed companies. WTK S/B paid $7 million for Amaplac in 1993 and also acquired 300,000 ha of forest near the River Jurua, an Amazon tributary, for approximately $2.4 million (*The Guardian*, 1993). Samling was reported to have bought a major saw mill and several tracts of land (*Lloyds List*, 1996). A recent audit found irregularities in two out of every three management plans. The companies follow the rules in their own areas, but also buy timber from clandestine loggers. Amaplac (WTK) was fined in 1993 for exporting illegal timber (*The Guardian*, 1993).

Criticisms from Governments

Some of the criticism of listed timber companies has come from the governments concerned. In January 1996, due to the Berjaya Group's poor environmental record of logging in Malaysia, a parliamentary debate on contracts that the government wanted to award to Berjaya was postponed (FT 1996).

Southeast Asian governments are increasingly holding logging companies accountable for their illegal logging and accounting practices. The accounting practices of companies are being examined more closely, and the Malaysian government has taken steps to recapture the tax revenues lost due to transfer pricing. In 1995, twenty timber companies were assessed for back taxes, with one reportedly owing up to US$40 million (Sizer and Rice 1995).

Governments subject to Malaysian timber companies' expansionary activities have also expressed criticism. In July 1994, the managing director of Berjaya Group Limited in the Solomon Islands was expelled from the country for allegedly attempting to bribe the Solomon Islands' Minister of Commerce, Employment and Trade when meeting to negotiate the company's request to take over a local logging company (*ibid*).

Criticisms about Inadequate Concession Pricing and Taxation

Some of the criticisms of companies have centred on the conditions under which they receive concessions. Some NGOs allege that companies pay too little for the forest resource and that many of them subsequently increase their returns by evading taxes through under-reporting of logging and transfer pricing. This means that resource owners, whether governments or communities, receive inadequate compensation for the extraction of the timber resource. It is sometimes claimed also that under-pricing of concessions gives the false impression that timber resources are abundant and thus discourages any attempts to manage and conserve the resource. Investments in forest management, regeneration and planting will not take place unless timber is priced at its full scarcity value (Panayotou and Ashton 1992).

There is evidence that some listed companies have been associated with very favourable contract conditions for their concessions. For example, Repetto and Sizer (1996) describe the case of the Government of Suriname's proposed contracts with Malaysian and Indonesian logging companies, one of which was the listed Malaysian company, Berjaya Group Berhad. Under the proposed contract with Berjaya for a 1.1 million hectare concession the largest share of net revenues from forest exploitation would have gone to the company. The Government could have increased its share of the revenues by over 50% and still left the company with a 30% rate of return on investment. Taking the three contracts together, Repetto and Sizer estimated that the amount of revenue forgone was US$50 million per year, equal to the Government's budget deficit at the time. As a result of this analysis and public opposition the Government did not sign the contracts.

What is less clear is whether companies are necessarily at fault for taking advantage of attractive concession conditions offered by governments. Implicit in the criticism is that companies are manipulating the situation and exploiting weak, ill-informed governments. This is much harder to substantiate.

It is notable that where brokers' reports cite cases of favourable concession conditions they are often presented as a favourable attribute of the company concerned:

- Berjaya Group Berhad were reportedly investing US$60 million in timber processing activities in the Solomon Islands in return for a free 1.5 million acre timber concession usually worth M$1,00-M$8,000 per acre (GK Goh 1994).

- Land and General Berhad's 500,000 acre concession in Papua New Guinea was reported as being an extremely attractive investment, having been acquired for a minimal initial outlay of M$15,000,000. It was expected to last at least 15 years based on an annual extraction rate of about 500,000 cubic metres. By 1994 Land & General had more than recovered its investment, despite the inferior quality and lower prices of logs from Papua New Guinea (GK Goh 1994).

4.4 Conclusions on the Link between Foreign Portfolio Investment and Forest Management

The number of listed forest products companies on the Kuala Lumpur Stock Exchange and the market capitalisation of the sector has increased considerably in recent years in comparison with other sectors. Many companies in the sector have used equity issues as a way of financing the acquisition of new concessions either in Malaysia or overseas. This suggests an increasingly important role for equity finance. However, not all companies have used listing as a means of gaining wider access to finance, appearing to be more concerned about other advantages such as tax concessions.

While a high proportion of the equity finance is from investors in Malaysia or in the region, a large number of institutional funds in North America and Europe had holdings in Malaysian forest products companies in 1996. In relation to the total market capitalisation of the sector their holdings were small, but concentrated in a few companies. Analysis of pension fund and insurance funds holdings might give a different picture but this information is not readily available. It is also possible that holdings were considerably greater in earlier years. Our interviews with fund managers suggest that this is the case as several of them indicated that they had sold holdings in some Malaysian timber companies.

Evidence of poor forest management is difficult to associate with particular companies. It is possible to identify some companies that have been the target of criticisms from NGOs and in some cases governments but there is little evidence available to substantiate the allegations made. Malaysian listed companies (or companies with listed vehicles) that appear to have aroused most comment are:

- Samling (Lingui and Glenealy)
- Rimbunan Hijau (Jaya Tiasa)
- Berjaya Group
- Kumpulan Emas
- Aokam Perdana

Investment and unit trusts in OECD countries had holdings in all of these companies in 1996. Holdings were quite high in the case of Jaya Tiasa, Kumpulan Emas and Aokam Berhad but fairly insignificant in the case of Lingui and Glenealy. The conclusion to be drawn is that portfolio investment from OECD countries could be an important source of incremental finance for Malaysian timber companies in general and also, it appears, for some of the companies that have been most associated with allegations of bad practice.

This suggests that institutional investors, if motivated, could potentially have some influence on the behaviour of certain listed timber companies in Malaysia. This still leaves open the question of why institutional investors should be concerned about the environmental and social performance of the forestry companies they invest in or why other stakeholders, governments in particular, might be justified in taking action to make this group of investors concerned. In the next section we examine the debate on this issue.

5. Harnessing Portfolio Investment To Promote Sustainable Forest Management

The preceding section has revealed that equity finance is playing an increasingly important role in the Malaysian forest products sector and that OECD institutional investors have holdings in some of the key players in the sector. These investors if motivated could have some influence so that less investment is channelled to activities with unacceptable social and environmental impact and that more goes to finance sustainable operations. This section considers the issues involved in harnessing this potential. It examines whether institutional investors with holdings in forest companies would be motivated to redirect their investments to avoid environmental and social impact and consider the justification for governments or other stakeholders to take action to influence the investment policy of institutional funds. We refer back to the three areas of market failure set out in Section 3 and examine the extent to which they are applicable to the forest products sector, at the same time considering the implications for policy.

With reference to the forest products sector the three areas of market failure and potential policy responses would be:

- Investors are making inaccurate valuations of forest product companies because of lack of understanding (or lack of reliable information) of how environmental factors affect financial performance. If this is the case, the required policy action would be to improve the financial community's understanding of the forestry sector and of the financial risks and impacts of unsustainable forest management practices. The presumption is that there is a strong positive link between the financial performance of a forest products company and its environmental and social performance.

- Investors who are concerned about the environmental and social impact of investment and not just financial return are restricted in their choice and thus their preferences are not being met. Thus, they may wish to invest in sustainable forestry operations but may be prevented from doing so by factors such as poor information and financial prudence requirements. If this is the case, the required policy action would be to improve the information available on the social and environmental performance of forestry companies, and, more generally, to remove the various restrictions that apply.

- There is a divergence between the private or financial return to investment in the forest products sector and the return to society as a whole because of the environmental and social impact of the forest operations financed. In this case investment could be used as an indirect source of leverage to reduce this divergence. Policy options could include restrictions on investment in unsustainable forest management or financial and other incentives to facilitate investment in sustainable forest management. The presumption is that in the absence of such interventions there is a negative relationship between the environmental and social performance of a forest products company and its financial performance.

The appropriate policy responses in the case of forestry thus depend on the relative importance of these areas of market failure. This is particularly relevant to the first and the third area of market failure as these represent two potentially opposing visions of how the sector operates. It is therefore important to consider the nature of the link between financial performance in the forest products sector and environmental and social performance.

5.1 The Link between Financial Performance and Environmental/Social Performance in the Forest Products Sector

For there to be a positive link between the financial performance and environmental/social performance of a forest products company at least one of the following conditions would have to be satisfied:

- Companies could reduce their costs of production and hence improve their profitability through greater attention to their environmental and social performance.

- Companies could derive a competitive advantage and increase their profitability through good environmental and social performance because of price premiums or improved market access.

- Government regulations and tax structures for forest management would have to require good environmental and social performance and be strictly enforced. Conversely, poor performance would have to be penalised through suspension of concessions or fines. That is, external costs and benefits of forest management would have to be increasingly internalised through the policy framework.

Forest Mining versus Sustained Yield

In many sectors as discussed in Section 3.2, there can be win-win opportunities for introducing less environmentally damaging technologies and improving productivity at the same time. Leading forest companies which have access to technology and expertise have been able to take advantage of these opportunities, particularly in the area of plantation management (IIED 1996). However, for other companies, improving environmental and social performance may imply a tradeoff. Forest mining, that is removal of commercially valuable timber without any subsequent management or attempts to ensure regeneration, can be highly profitable and thus more attractive to both companies and investors than an approach based on sustaining yield of timber over the long-term. This is generally the case where logging concession periods are of short duration and there is political uncertainty over the length of tenure (Panayotou and Ashton 1992). Companies engaged in such practices could therefore be an attractive prospect for investors.

A somewhat different view is that the maintenance of such high profitability depends critically on the company’s ability to secure further concessions at favourable prices once the existing concession is logged out (Campanale 1995). Such opportunities may not be so easily available as in the past. There is therefore a strong possibility that the costs of production of such companies could increase with adverse implications for profitability once they are forced to move on to other concessions. Thus, where there are constraints on the forest resource, high short-term earnings, if obtained through accelerated logging rates, can come only at the expense of future earnings (Phileo Peregrine Securities 1993; ING Barings pers. comm. 1996). The problem is that the valuation methods typically used by the investment community concentrate on short-term financial ratios (for example net asset value, cash flow measures, price to book measures, return on equity, price-earnings ratios) which provide a summary of the financial performance of a timber company. These can be misleading if not supplemented by a more long-term evaluation of key factors affecting profitability. Similarly, Mansley (1996) argues that international capital markets are over-valuing forest product companies because investors assume that the income from the activities of such companies can be sustained when in reality it is finite. This is because it depends on access to low cost concessions being maintained. Morevoer, this over-valuing has the effect of making it easier for such companies to raise more capital. The implication is that if investors examined the likely profitability over a longer period they would reduce their estimates of the value of the companies concerned. For this reason some research analysts and fund managers consider a discounted cash flow (DCF) analysis a more appropriate method for valuing a forest products company than the use of price-earnings ratios and other summary financial indicators (Campanale 1995; Phileo Peregrine Securities 1993; GK Goh 1994; Foreign & Colonial, pers. comm. 1996; WI Carr 1997).

The results of a DCF analysis will depend heavily on the assumptions made, for example, about timber yield and price trends. But the difference its use can make is illustrated by the case of Aokam Perdana where brokers using a variety of methods reached different conclusions about its prospects.

Box 5a Conflicting Views on Company Prospects - The Case of Aokam Perdana

Phileo Peregrine Securities in 1993 used a DCF analysis to assess the performance of Aokam Perdana. It estimated that the net worth of Aokam's 50% share of the Sagisan concession's total potential timber yield ranged between $538m and $1091m (worst case and best case scenario), providing Aokam with a DCF backing of $4.06 to $7.72 per share on a fully diluted basis. At the time, Aokam was trading at $13.30. Thus Phileo Peregrine concluded that Aokam Perdana was grossly over-valued. It argued that Aokam's high profit margins at the time were the result of under-priced logs rather than the market competitiveness of its processed products. Its DCF analysis questioned whether Aokam could maintain this access to cheap logs in the long-term given the characteristics of the Sagisan concession and current logging rates. By February 1997, Aokam Perdana was trading at RM3.24 suggesting that Phileo Peregrine's concerns were justified.

Baring Securities acknowledged the concerns raised by Phileo Peregrine and others over log yields and concession period for Idris Hydraulic's Sagisan timber concession in Sabah which was the main raw material supplier for Aokam Perdana. However, Barings maintained that Aokam Perdana was less dependent than other companies on high quality log supply because of the type of technology it used. It could utilise lower grade timber and what would previously have been regarded as waste materials to manufacture its veneer products. It therefore claimed that a PER valuation was valid for Aokam Perdana. This led Barings to make optimistic forecasts about Aokam's performance which, as shown in Table 5a, were not borne out in reality.

GK Goh (1994), like Phileo Peregrine, used a DCF analysis to value Aokam Perdana but also considered other financial indicators. It noted that DCF was not so appropriate to companies which sourced externally and which could use substitute materials such as wood wastes. From the DCF analysis it found that Aokam Perdana was trading at a 101% premium to its net present value putting it near the bottom of a list of companies assessed on this basis by GK Goh. However, the recommendation GK Goh made was to accumulate the company's stocks and Aokam was one of the companies it favoured in its sector review. This presumably was because Aokam Perdana ranked high on other indicators such as operating margins and because it was considered a high growth company.

Subsequent research reports (in Malaysia) attribute the company's poor financial performance to management credibility problems, and rumours have also been reported that the concessions supplying Aokam Perdana with timber were becoming depleted. Aokam experienced a jump in pre-tax profits in 1994 (RM 54,460,000 profits before tax in 1993 compared to RM 106,459,000 profits before tax in 1994), and a consequent fall in 1995 (RM 45,682,000). Aokam Perdana blamed its poor financial performances and the fall in 1995 and 1996 profits on slow market conditions, lower prices of timber products, and a shortage of logs due to the unusual raining pattern in the region (Aokam Perdana 1995).

Source: Aokam Perdana 1995; Baring Securities 1994; Campanale 1995; Credit Lyonnais Securities Malaysia Report 1995; GK Goh 1994; Phileo Peregrine 1993; WI Carr Resesarch, Malaysian Timber Sector, 1997.

Cost Implications of Sustainable Forest Management

The debate about appropriate investment valuation methods has centred on the long-term cost implications of not adopting a sustained yield approach in forestry. However, sustained yield is just one aspect of sustainable forest management. Many of the other attributes of good forest stewardship as implied by the various guidelines developed for sustainable forest management involve increases in cost. Simula (1997) has identified the following sources of cost increase associated with sustainable forest management:

- set-aside of areas of natural vegetation
- reduced harvesting rates
- low-impact logging methods
- changes in the temporal distribution of costs and revenues

IIED (1996) conclude that cost increases with sustainable forest management (SFM) could range between 10 and 20%. Ghazali and Simula (1994) have examined the costs of low impact logging techniques and found that they range from US$ 38 to US$60 per hectare in the tropics, roughly twice the cost of conventional logging. The certification process will also involve some fixed cost which is likely to be of most concern to smaller companies.

There is some indication, though, that companies can make cost savings because of the greater attention to management and planning that sustainable forest management implies, but the relative magnitude is not clear (Simula 1997)**.**

Market Advantages of Improved Environmental and Social Performance

Some producers may be able to recover these increased costs through price premiums for wood from sustainably managed forests. Thus, Crossley *et al* (1996), argue that sustainable forestry makes good business sense and that the sustainable forestry sector is a good investment opportunity. However, the size of this market opportunity has not been demonstrated. Notably, one of the analysts/fund managers interviewed expressed scepticism about the growth prospects for this segment of the market. Given that Buyers Groups have generally adopted a policy of not paying premiums for certified timber, the benefits to producers of SFM are more likely to be in terms of market access. The implications for profitability and consequently financial performance are not clear.

Regulation and Incentive Structures

The extent of regulation and incentive structures which internalise external costs may, therefore, be the crucial factor affecting the link between environmental performance and financial performance of forest product companies. In the absence of effective regulation in many countries that are rich in forest resources, it is unlikely that all companies practising good forest stewardship would be fully rewarded through the financial markets or that companies engaged in unsustainable forestry would be financially penalised.

5.2 Financial Performance in the Malaysian Forest Products Sector

In the case of the Malaysian forest products sector it can be asked whether financial returns to investors would be higher or lower if more account was taken of the wider impacts of the activities of the companies concerned.

Empirical evidence on the financial performance of Malaysian timber companies is mixed. While they were reported to be highly profitable up to the mid 1990s there is an indication that returns to investors have been disappointing.

Table 5a compares forecasts made by brokerage houses for three Malaysian timber companies with actual results. It can be seen that earnings per share and dividends per share have tended to be significantly less than forecast.

Table 5a Comparisons of Forecasted and Actual Company Results

Timber company	Year	EPS (sen)[a]	EPS (sen)[b]	EPS (sen)[c]	Gross DPS (sen)[a]	Gross DPS (sen)[b]	Price (Rm)
Aokam Perdana Bhd	Jun-99			**-20.5 f**			
	Jun-98			**-26.0 f**			
	Jun-97		**166.5 f**	*-32.5 e*		**12.0 f**	3.80 (Feb)
	Jun-96	**147.4 f**	**127.3 f**	-72.5 a	**12.0 f**	**10.5 f**	4.46 (May)
	Jun-95	**129.6 f**	*94.6 e*	24.2 a	**10.0 f**	*9.0 e*	14.70 (Mar)
	Jun-94	*69.3 e*	55.8 a		***7.5 e***	7.5 a	22.4 (Oct)
	Jun-93	37.0 a			6.0 a		20.71 (Dec)
	Jun-92	20.9 a			4.5 a		5.68 (Dec)
CHG Industries Bhd	Jun-98			**7.2 f**			
	Jun-97			**11.0 f**	**10.0 f**		6.30 (Mar)
	Jun-96	**115.5 f**	**50.9 f**	*0.4 e*	**10.0 f**	**12.0 f**	8.15 (Mar)
	Jun-95	**92.0 f**	**42.1 f**	-13.8 a	*10.0 e*	**11.0 f**	6.25 (Dec)
	Jun-94	51.6	*35.4 e*	30.0 a	*10.0 e*	*10.0 e*	8.45 (Oct)
	Jun-93	29.5	30.6 a		10.0 a	10.0 a	11.00 (Dec)
	Jun-92	12.0			6.5 a		3.80 (Dec)
Jaya Tiasa Hldgs Bhd	Jun-99			**14.6 f**			
	Jun-98		**83.3 f**	**15.8 f**		**15.5 f**	
	Jun-97	**36.9 f**	**74.8 f**	19.9 *e*	**10.0 f**	**13.5 f**	12.70 (Feb)
	Jun-96	**30.1 f**	*59.3 e*	22.2 a	**10.0 f**	*12.1 e*	14.00 (Aug)
	Jun-95	**27.3 f**	42.4 a	30.9 a	**10.0 f**	9.1 a	8.85 (Dec)
	Jun-94	8.9 a			10.0 a		9.05 (Oct)

[a] Baring Securities, Malaysian Timber Sector Review, July 1994
[b] Credit Lyonnais Securities, 1995 (except Jaya Tiasa Holdings: 1996)
[c] WI Carr, 1997
a = actual figures, e = estimated figures, f = forecast figures.

Table 5b presents estimates of the rates of return that investors buying shares in 1994 in a number of Malaysian timber companies would have obtained if they had held them until 1997. These are all negative with one notable exception, Jaya Tiasa.

Table 5b Historical rates of return 1994-1997 from investments in selected Malaysian timber companies

Name	*Rate of return**
	%
Aokam Perdana Bhd	-78.5
CHG Industries Bhd	-51.2
Golden Pharos Bhd	-31.7
Idris Hydraulic Bhd	-22.0
Jaya Tiasa Holdings Bhd	123.7
Kumpulan Emas Bhd	-21.7
Minho Bhd	-4.4
Pacific Chemicals Bhd	-53.5

* Approximate figures[8]
Source:IIED estimates

These estimates are approximate as information on dividends is not always available. However, they are consistent with the responses given by a number of investment fund managers interviewed. Most of them indicated that returns on their investments in certain forest product companies, notably Aokam Perdana, had been disappointing, leading them to divest of their holdings.

This could support a view that investors could benefit from examining the environmental and social performance of these companies but it is not clear that such poor performance can be attributed to environmental factors. The fund managers interviewed indicated general factors such as changes in the prices of logs and wood products, and company specific factors such as poor management. None of them identified environmental issues as a contributing factor. In addition, some recent broker reports on the timber sector in Malaysia (eg WI Carr 1997) highlight the effect of low plywood prices on company performance. In particular, the tightening of credit in China towards the end of 1993 is believed to have to been a major contributing factor to the fall in world plywood prices and the subsequent financial problems of Malaysian timber companies in this segment of the market. The fact that Jaya Tiasa, which through its association with Rimbunan Hijau has been heavily criticised for its environmental and social performance achieved such high returns would suggest that the link is rather complex.

5.2 Policy Responses for the Forest Products Sector

Improving Information about the Environmental and Social Performance of Forest Product Companies

If the first type of market failure is important, then improvement of the information available to the financial community should be beneficial. Campanale (1996) has argued that the

[8] The cash payoff to owners of common stocks comes in two forms: cash dividends and capital gains or losses. The (expected) rate of return that investors expect from this share is defined as the (expected) dividend per share (Div_1) plus the (expected) price appreciation per share, all divided by the price at the start of the year (Brealey and Myers, 1991):

$$\text{Expected) return} = r = \frac{Div_1 + P_1 - P_0}{P_0}$$

investment analysts and investors in general will benefit from more information about the sustainability of forest management practised by the companies in which they invest. The argument is that with better knowledge about the environmental and social performance of forest product companies they can make more accurate assessments of the values of companies and the associated risks.

Brokers' reports on the forestry sector in Malaysia give an indication of the factors considered to make investments attractive. The most important of these is often the access to raw material supply. Other factors driving the brokers' assessment of timber companies are the extent of downstream processing, as this reduces risk, and the experience of management in all aspects of the timber sector. Thus, Crosby (1996) favours Pan Pacific Asia because of its large high-yield concession and possibility of access to further concessions through the private arm of the company, its recent acquisition of a plywood company and its management which have been in the timber business for about 50 years. Similarly, W I Carr favours Samling and Rimbunan Hijau for their large timber concessions and integrated operations.

Reasons for not favouring companies are primarily concerned with depressed plywood prices or excessive emphasis on offshore activities. CLSA (1996) states a preference for companies with emphasis on Malaysian operations arguing that offshore activities are risky because of factors such as political uncertainty and tighter controls on logging activities. It cites as examples the delay of the Idris/Aokam venture in Myanmar by one year and the suspension of the operation of Kumpulan Emas for two months in the Solomon Islands. It argues that the market is now more aware of these risks. GK Goh (1994) expresses a similar preference for companies operating in Malaysia but states that it will not exclude investments in countries where political risk is greater provided returns are higher. To illustrate this, it cites the example of Berjaya Group which it favours despite operating in the Solomon Islands, a country of high political risk, because it has been able to secure a massive concession there at virtually no cost.

There is some discussion in the brokers reports of environmental factors, in particular the sustained yield requirements in certain forest areas of Malaysia in line with the International Tropical Timber Organisation (ITTO) targets. However, the tendency is to discuss environmental issues which appear to have financial implications, such as access to timber supplies and the impact of tighter environmental regulations. Thus, W I Carr (1997) discusses the initiatives in Malaysia to promote sustainable forest management in terms of their effect on timber supply (thus, taking it to mean sustained yield) and argues that the industry's strict adherence to environmental regulatory constraints in Sarawak will be beneficial as it will mean that there is less danger of government imposing reductions in log export quotas. However, other social and environmental aspects of sustainable forest management such as protection of biodiversity and relations with local communities appear to be of less interest, possibly because they are not perceived as affecting the financial performance of the company.

One of the features considered by the brokers' reports to be most attractive about certain timber companies is their ability to secure a timber concession at very low cost. For example, GK Goh (1994) states a preference for companies with high quality concessions acquired at low entry costs " this ensures the availability of supply and locks in the fixed cost of the basic raw material". Yet this is an aspect of Malaysian timber companies that has attracted considerable criticism from environmental NGOs.

Thus, it is not clear how much difference the increased availability of information on environmental and social performance would make to the brokers' assessments. A similar impression was gained from the interviews conducted with fund managers and analysts. Only two of the ten people interviewed thought that more environmental and social information would be useful. However, their attitudes towards environmental issues varied. One fund manager stated that if an environment report on listed timber companies was published he would not pay to subscribe to it and even if it were free he would not necessarily have the time to look at it. In contrast, another fund manager gave the example that if a timber company were cutting down a tropical moist forest and replanting it with a eucalyptus plantation he would be concerned.

Further indication is given by a more extensive survey of investment community attitudes (Gullison *et al*, forthcoming). This found that the average importance ranking for independently verified environmental audits on a scale from 0 (not important) to 3 (very important) of 21 mainstream analysts and fund managers was 0.9. For social audits the average ranking was somewhat lower at 0.6. For the responding green ethical fund managers (9 out of 13) the average rankings were 1.5 and 1.0 respectively. Thus there is some interest in better information on environmental and social performance but it is not overwhelming.

This survey also asked whether companies which had been independently assessed as having good forest management, i.e. meeting the criteria of certification would be perceived as less risky. The majority of respondents did consider that there would be lower risk as a result but that this would not reduce the rate of return that would be acceptable to them for this type of investment. This may be because the main risk they identified from investing in forest companies was the cyclicality of commodity prices (*ibid).*

The conclusion to be drawn is that improved information on environmental and social performance will help in some cases where there are win-wins but it is not a panacea. Where there are tradeoffs between financial returns and good environmental and social performance, improved information can make these more apparent. However, where the objective is to maximise financial returns and this conflicts with improving environmental and social performance, the availability of such information seems unlikely to have an impact on mainstream investors. It will however, be important for green/ethical investors as discussed below.

Meeting Investor Preferences for SFM

Section 3 outlined a number of reasons why investors concerned about the social and environmental impact of their investment may be restricted in the investments they can make. Most of these apply to investments in various sectors and there is little reason to suppose that forestry would be any more or less affected than other activities in emerging markets. One possible exception could be in the case of information on environmental and social performance as forestry appears to present more challenges in this regard than other sectors. Certification schemes for forest management are relatively recent and there is still considerable diversity of approach with some initiatives emphasising performance standards which address forest management and others concentrating more on process standards such as development of environmental management systems which address the enterprise rather than the forest. Local interpretation of principles and criteria is also considered essential particularly in the balance made between environmental and social criteria. For other sectors such as manufacturing the criteria to assess may be more straightforward, for example emissions of certain pollutants to air and water or type of technology employed.

Until recently, many ethical and green funds avoided tropical forestry. For example, in 1996, the NPI Global Care funds and the HTR Fund indicated tropical forestry as an area of avoidance (Holden Meehan 1996). However, with the introduction of certification, some of these funds have modified their criteria. For example, NPI and Friends Provident Stewardship Fund now specify the requirement for tropical forestry operations to be certified by an organisation accredited under the Forest Stewardship Council system. This suggests that better access to information on SFM and more widespread takeup of certification to provide verifiable information on environmental and social performance could lead to increased investments in forestry operations on the part of such funds.

Addressing the Divergence between the Private Financial Returns from Investment in Forestry and the Returns to Society

Given the extent of tradeoffs in forest management there is scope to use investment as a leverage point for addressing the gap between private or financial returns from investment in forestry and the social and environmental impact.

Restrictions on "Undesirable" Forest Investments

Some of the problems associated with placing restrictions on investment have already been discussed in Section 3.3. The forest products sector is particularly problematic in this regard because it is based on a resource which has global implications for climate change and biodiversity but which lies within national boundaries. Concerns raised by Northern countries about the global impacts of deforestation on climate change and biodiversity are often regarded by developing countries as a threat to their sovereign rights (Kumari 1996). Any government-sanctioned attempt to discourage Northern investors on environmental grounds from financing forest companies in developing countries could thus be conceived as a breach of sovereignty as well as an impediment to the free flow of capital.

A counter-argument is that such measures could support developing country governments in their efforts to manage forest resources and to enforce regulations. However, it is often the case that forest companies which have been the subject of external criticism have been operating with the sanction of the government concerned (although there may well be differing opinions about the performance of the company within the government). The criticisms centre on global impacts, as discussed previously, and on local issues such as treatment of indigenous peoples, loss of local livelihood opportunities and underpayment for the forest resource. They reflect a lack of confidence in the government concerned to manage its forests and to protect the interests of different groups involved.

The implication is that any attempt to influence the flow of private portfolio investment in forestry would have to be voluntary rather than government-sanctioned or else determined through a multilateral agreement which would set out the circumstances in which restrictions on investment could be put in place for environmental motives. Given the concerns currently being expressed about the proposed Multilateral Agreement on Investment and its potential impacts on sustainable development, the prospects for this seem rather remote. The main concerns are that the MAI in seeking to liberalise investment rules will undermine the ability of host governments to regulate access to natural resources and to protect the environment and will reduce the accountability of foreign direct investors for environmental damage caused by their operations in the host country (Werksman 1997).

Promotion of Investment in SFM

There are indications that sustainable forestry enterprises have limited access to capital markets. Crossley *et al* (1996) argue that such companies can be considered as new investment areas involving high transaction costs for fund managers. As with other new areas, investment managers would have to spend time researching promising opportunities and hire additional forestry expertise to assist in the review process. This restricts the access of such companies to equity finance. Similarly, it may be difficult for such companies to meet the criteria of listing as these, with their emphasis on financial records and trading history, tend to discriminate against newly established companies.

A number of measures could therefore be adopted to facilitate the access of SFM enterprises to capital and to make the returns on investment in them more attractive, for example, simplified listing requirements as in the approach of the AIM, and tax concessions on investments in SFM. However, this presupposes that such companies are interested in portfolio investment as a source of finance. A survey of companies certified under the FSC initiative in 1997? found that only one was listed and that the others were not interested in seeking listing (Gullison *et al*, forthcoming). While there is general agreement that considerable finance will be required for widespread adoption of sustainable forest management, the extent to which lack of access to portfolio investment is a constraint on development of SFM has not been empirically demonstrated as yet.

Shareholder Action

A more effective approach may be for investors to pressure existing companies engaged in conventional forest management to improve aspects of their performance. This has parallels with the Buyers Groups set up in a number of countries which work with their suppliers to to induce them to apply for certification. The form that such pressure could take would depend heavily on the legislative framework for corporate governance and shareholder rights and responsibilities in the countries concerned. In Malaysia, for example, there are substantial difficulties in getting resolutions to Annual General Meetings of shareholders. One approach would be for “constructive engagement” to discuss environmental and social issues with the management of the forest company concerned and to propose initial measures such as an independent audit. The transactions costs of this approach are likely to be substantial, given that the investments of most concern are in tropical areas and monitoring of progress would be essential. However, such an approach could be feasible if a number of institutional investors worked together on this.

This would still raise the issue of why such investors, if they are not specifically pursuing a green/ethical investment policy, would be motivated to be concerned about tropical forestry unless they could see some positive link with financial performance. It is possible that some institutional investors, while not wanting the same extensive criteria as green/ethical funds, could be concerned about specific issues such as forest management. In addition, there are certain types of investor such as pension funds, and local authority pension funds in particular, and charities which do appear to be interested in the wider impacts of their investment. As discussed in Section 3.3, these types of institutional investor are constrained by legal restrictions from pursuing a full green/ethical policy with respect to their investments. Some do, however, adopt the constructive engagement approach and may be motivated to use their leverage as shareholders to enter into dialogue with timber companies. Again, given the costs involved, this is unlikely to be practical for an individual fund. Group action would be required.

6. Conclusions and Recommendations

Portfolio investment flows (bond and equity) to the South have increased dramatically over the last ten years. At the same time institutional investors have become more important. Not only have they increased their share of companies listed on developed country stock markets but they have also started to invest more in emerging markets.

The flows of portfolio investment to forestry and to specific countries are not very well documented but are widely believed to be increasing in importance. In Malaysia it was found that investment and units trusts in Europe and North America and a few Asian countries hold just over 3% of the market capitalisation of Malaysian timber companies listed on the KSLE. This is under the broadest definition of timber companies and includes those companies that derive only a small proportion of their turnover from timber activities as well as those which are totally dependent on timber extraction and processing. This does not include all pension and insurance funds and so may be considerably underestimated. Nevertheless, even with this restricted listing of institutions it was found that their holdings in certain companies were relatively high, and as large as those of substantial shareholders named in the companies' annual reports. These companies include:

- Land and General 16.5%
- Ekran Berhad 13.8%
- Aokam Perdana 7.5%
- Jaya Tiasa 5.7%
- Kumpulan Emas 4.2%

It is also important to consider institutional holdings in relation to free capital, as this is typically less than 50% of the market capitalisation of the companies in the sector. For example, in 1996, 57% of the shares in Jaya Tiasa were held by substantial shareholders.

Another factor that suggests potential influence for overseas investors is the need for timber companies to raise additional capital through equity issues. Malaysian timber companies have made a relatively large number of equity issues in recent years, in some cases to finance the acquisition of concessions. This suggests that foreign portfolio investment can play a significant role in financing their expansion.

However, private companies are still very important in the timber sector in Malaysia and have considerable financial resources. While there is a trend for them to seek listing or to acquire listed subsidiaries their primary motive does not always seem to be to gain access to new sources of finance. Other benefits of listing such as access to tax concessions through their change in status appear to be extremely important.

Portfolio investment can have positive effects on economic growth but concerns have been raised about its environmental and social impact. Over the last 15 to 20 years numerous funds have been set up to cater for investors who are concerned about the social and environmental impacts of their investment. Although these have grown rapidly they still account for only a small proportion of total investments. Thus, significant investment is made with very little attention to its wider impacts on the environment and on society.

Evidence on the contribution of portfolio investment from industrialised countries to unsustainable practices in the tropical timber sector is scanty. Much of the criticism of the the tropical timber sector in Malaysia has been directed at private companies as well as listed ones. However, some listed companies have been at the centre of concerns about poor practice, for example Kumpulan Emas whose operations were suspended by the government of the Solomon Islands, and Jaya Tiasa because of its connnections with Rimbunan Hijau which has been heavily criticised for its operations in Papua New Guinea. Moreover, institutional holdings in some of these companies are quite high as shown above. This suggests that institutional investors, if motivated, could have some influence on company behaviour. At a minimum they could pressure such companies to subject themselves to external audits. This would establish or challenge the validity of any criticisms of the company's approach to forest management.

Intervention to address the environmental and social impacts of portfolio investment can be justified by reference to three types of market failure:

- where investors make inaccurate valuations of companies because of poor understanding of the link between environmental performance and financial performance;

- where investors who are concerned about the social and environmental impact of their investments are not able to meet their preferences because of information failures and restrictions on investment decisions;

- where there is a divergence between the private financial return from investment and the return to society as a whole because of the environmental and social impact of the activity financed.

Much of the recent research on investment has attempted to show evidence for the first type of market failure. It has aimed to show that environmental performance and financial performance are in many cases positively related. The main conclusion of such research is that the investment community needs improved information on the environmental issues facing different sectors. We have attempted to assess the evidence for the extent of such market failure in forest investments. Returns on investments in Malaysian timber companies have tended to be disappointing in recent years although there have been some notable exceptions, such as Jaya Tiasa. Many institutional investors have sold their holdings in some Malaysian timber companies as a result. It is possible that poor understanding about the environmental impact of these companies and inappropriate valuation techniques may have contributed to the overvaluation of these companies, but falls in commodity prices have also been extremely important. In some notable cases, such as Aokam Perdana, a failure to assess the available timber supply accurately appears to have led to overvaluation, although the company itself has attributed its disappointing financial performance to other factors.

From our interviews with fund managers and research analysts and examination of brokers reports on the timber sector in Malaysia, we conclude that there is increasing awareness of the importance of security of timber supply and also of the implications of tightening environmental regulations. Both of these factors are considered crucial for the profitability of forestry investments. However, the fund managers interviewed, with one or two exceptions, did not consider that more information about the environmental and social performance of companies would be useful to them. This is in spite of having received disappointing returns from some forestry investments. It is clear therefore that they do not perceive the problem to be one of environmental performance but of other factors such as commodity price movements, and the overall management of companies. Thus the extent of the first type of market failure in the forestry sector is unclear.

Market failures in the investment process do appear to be restricting the choice for those investors who are concerned about the environmental and social impact of their investments. Many of these restrictions, such as the lack of involvement of pension fund members in the decisions on investment and the lack of information given to them about holdings, are general and would apply to many sectors including forestry. What is not known is the effect that removing these restrictions would have on the demand for green/ethical investment. Surveys of investor preferences are needed to assess this.

An issue that applies particularly to forestry investments is the lack until recently of a reliable system for assessing the environmental and social performance of forest management. As a result some green/ethical funds have avoided tropical forestry completely. As certification schemes are more widely taken up, this problem can be overcome. Thus green/ethical funds such as the Friends Provident Stewardship fund are tending to include in their criteria the requirement for tropical forestry operations to be certified.

Because of the the incentives for forest “mining” and the cost increases that are likely to be involved in good forest stewardship, we are not convinced that there will always be a positive relation between environmental performance and financial performance. Attention is therefore needed to the third type of market failure where investment would be used as a leverage point for addressing the externalities of the activities financed. This could take three forms: restrictions on investment in unsustainable forestry, promotion of investment in SFM or shareholder action. Measures to restrict investment in companies with poor environmental and social performance appear to be the most problematic because of trade concerns and difficulties of establishing criteria for assessment. These have most potential for implementation within an international agreement on portfolio investment. Measures to promote the financing of SFM eg through concessions on capital gains taxes or simpler listing requirements on alternative stock exchanges, have potential. There are numerous precedents of concessions to promote certain types of investment considered desirable because of their wider impacts. These are usually defined in terms of technological innovation. Application of such concessions to investments in companies that are innovative in terms of improving their environmental and social performance would be consistent with this. But little is known as yet about the impact they would have in terms of influencing the behaviour of existing companies considering expansion, or encouraging new companies practising SFM to seek finance from portfolio investors. In addition, other issues would need to be resolved. While OECD governments might be persuaded to grant tax concessions on investments in domestic companies meeting certain environmental and social criteria they would probably be less willing to finance tax concessions on investments in foreign companies listed overseas.

Shareholder action provides an alternative point of leverage for influencing the practice of established companies. The scope for such action will depend on the legal context as regulations on corporate governance vary considerably worldwide. It is probable that the most that may be feasible is constructive dialogue between the institutional investors and the management of the company concerned. The motivations of institutional investors will also be important. Most will be persuaded more by evidence of a positive link between environmental performance and financial return. As argued above we are not convinced that this will always be the case for tropical forestry, in the absence of effective regulation worldwide. Alternatively, it is possible that some institutional investors while not wanting the same extensive criteria as green/ethical funds could be concerned about specific issues such as forest management. Finally, there are certain types of institional investors such as local authority pension funds which do not necessarily pursue a green/ethical investment policy because of financial prudence requirements but have wider concerns about the impact of their investments. They would be motivated to use their leverage as shareholders to attempt to influence the behaviour of timber companies and persuade them to improve their environmental and social performance.

Research Needs

There are a number of areas of research that could fill some of the gaps in evidence highlighted in the preceding paragraphs. These could be both general applying to a number of sectors or could be directed specifically at forestry.

*1.**The link between environmental/social performance and financial peformance***
There has been much discussion about this link and a number of company case studies have shown examples of a positive link in various types of activity between environmental improvements and the financial performance of the company. There has been some systematic statistical analysis of this relationship but mainly in the US and Europe. Moreover, in both typesof analysis, social aspects of performance have received little attention. There is thus a need for more comprehensive analysis of the impact of the environmental and social performance of companies operating in the South on returns to investors. This would also require an examination of the characteristics of different sectors which might affect the nature and intensity of this link as well as external factors such as enforcement of regulations which can affect the relationship and which can vary considerably worldwide.

*2. **Practical significance of barriers to green/ethical investment**.*
While it is possible to identify a number of barriers to green/ethical investment, it is not clear what the impact of removing such barriers would be. It is therefore important to conduct surveys of scheme member preferences to assess their level of interest in green/ethical investment and the extent to which they are prepared to trade off rate of return or risk for improved environmental and social performance. This would focus on schemes where the choice of investment is restricted for the individual member. These would include occupational pension schemes, private pension schemes and insurance funds. It would also be important to assess the exent of concern about specific issues such as tropical forest management. While investors may not be interested in a wide range of green/ethical issues there may be some issues that are of particular concern to them. It would also be useful to conduct a survey of the motivations of and constraints facing managers of funds belonging to institutions considered to have wider social responsibilities. These would include charities

and state or local authority pension funds.The aim would be to assess their interest in green/ethical investment and the extent to which these institutions are restricted in their investment decisions by the financial prudence requirements and other factors.

*3.**Financial and regulatory incentives and restrictions related to investment** -*
There are numerous examples worldwide of financial or regulatory mechanisms being used to promote certain types of investment deemed desirable and to restrict others. These have been introduced for a variety of motives such as to promote technological innovation or to encourage personal savings.

In some cases these concessions or restrictions could be applied to achieve environmental and social goals. It would be important therefore to document the range of incentives and restrictions on investments that exist worldwide and consider their effectiveness in meeting their current objectives. The next step would be consider how they could applied to meet environmental and social goals and assess their potential impact. Again, the promotion of sustainable forest management through such incentives could be considered specifically.

*4. **Prospects for a multilateral environmental agreement on portfolio investment** -*
There has been much discussion recently of the Multilateral Agreement on Investment which focuses primarily on foreign direct investment and on the rights and responsibilities of host countries. The environmental implications of this agreement have given rise to controversy. The prospects for an agreement on portfolio investment which would focus on the rights and responsibilities of investing countries may therefore be remote. Nevertheless, it would be important to consider the issues that such an agreement might raise. It could be particularly important in relation to global externalities such as climate change or to activities that are related to international environmental agreements. For example, where a national government has committed itself to meeting a carbon emissions reduction target, it may be contradictory for portofolio investment from this country to be financing carbon-intensive development in the South.

*5. **Financing Preferences of Companies with Good Environmental and Social Performance***

While portfolio investment is an important source of finance for many companies, there is little empirical evidence of the extent to which companies which have good environmental and social performance are interested in this type of finance. There is an assumption that such companies are held back by lack of finance and that easier access to portfolio investment could help. A recent study (Gullison et al forthcoming) has surveyed the companies that have been certified under the FSC initiative and found that only one is listed and that the others are not interested in seeking listing. There is a need to examine:

- the extent to which lack of finance is a significant barrier to companies trying to establish themselves in the green/ethical niche;
- the type of finance that such companies are seeking;
- the reasons for preferring one type of finance over another;
- attitudes to portfolio investment as a financing source;

[i] Credit Lyonnais Securities. Malaysia Research: Timber Sector. Identifying sustainable growth: a treacherous forest. March 1995.

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