ASIAN SECURITIES ANALYSTS FEDERATION INC.

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EDITORIAL

Welcome to our fifth issue.

As soon as the uncertainty and worries of war seem to be subsiding, we are hit by pestilence in the form of the SARS pneumonia outbreak. However, we manage to keep going and here is our latest offering.

A big thank you to all our contributors, and to all who helped put this edition together.

Bob Bunker – HK Securities Institute
Deepak Gupta – Institute of Finance Professionals NZ
(Joint Editors).

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Sustainable and Responsible Investment (SRI): A Fast Growing Global Industry Coming to Asia

By Louisa Mitchell, Executive Director of ASrIA, Association for Sustainable and Responsible Investment in Asia. ASrIA is a not-for-profit membership association dedicated to promoting sustainable and responsible investment (SRI) practice in Asia. ASrIA has 97 members including investment institutions managing over US$2 trillion in assets. In order to raise awareness about SRI, ASrIA has run conferences, seminars and workshops, and published wide-ranging research on SRI issues. ASrIA has also created a network of people and organizations committed to developing SRI in Asia. ASrIA's website, http://www.asria.org/, is the primary resource for SRI in Asia, already attracting over 1,300 page views per day and 5,000 subscribers to the regular e-bulletin.

What is Sustainable and Responsible Investment (SRI)?

Sustainable and responsible investment (SRI), also known as 'socially responsible investment', 'ethical investment' or 'green investment', is an investment approach that integrates social and environmental considerations into the investment decision. Financial performance is a critical component of the decision-making process, just like any other investment strategy, but additional values are also taken into consideration.

SRI started as a purely ethical movement in the US in the 1920s, providing the opportunity for church groups and others to avoid investing in companies engaged in the production of tobacco and alcohol. It has since evolved into an investment strategy that addresses the wider business-related issues, such as treatment of employees and environmental management, as part of basic risk management.

There are several different SRI strategies. These can be summarized as: Screening, Shareholder Engagement and Community Investment.

Screening

Screening is an investment process that considers the social and environmental consequences as well as economic consequence of investments. ***Negative screening*** of a portfolio is the process of excluding stocks in sectors that are not considered socially responsible, such as:

- Military
- Gambling
- Pornography
- Alcohol
- Tobacco
- Repressive Regimes
- Nuclear
- Animal Testing

Positive screening of a portfolio is the process of actively trying to include stocks that make a positive social and environmental contribution. This contribution might be through their operations, for example companies operating in 'industries of the future' such as:

- Resource Productivity (waste mgmt)
- Renewable Energy
- Information and Technology
- Telecommunication
- Multimedia
- Mass Transit
- Health and Nutrition
- Education and Training

Or this contribution might be through being 'best in class' in their sector on account of their progressive environmental and social policies and procedures, strong corporate governance and good business ethics. A few examples of these criteria which might be examined are as follows:

Environmental	*Social*	*Governance/Ethics*
▪ Energy – tracking carbon emissions, use of renewables	▪ Welfare at work – employee turnover, health and safety record, family friendly	▪ Board composition – independent directors
▪ Water use – volumes, turnover, pollution	▪ Profit sharing – profit share or stock option schemes	▪ Executive compensation – linked to performance
▪ Wastes & Toxics – hazardous waste, waste burned, waste for landfills	▪ Civil or Employee Actions - % unionized, employee strikes, community demonstrations	▪ Auditing and reporting – independence, frequency and standard of disclosure

By no means are these all of the criteria that might be examined. These are simply some examples of relevant environmental, social and governance/ethics criteria. All SRI funds have their own criteria for assessment and focus on different issues. The SRI fund buyer must chose a fund that fits with their values and focuses on issues most important to them.

Shareholder Engagement

This approach involves engaging with companies through regular contact with management or through exercising voting rights either at shareholder meetings or in absentia by way of proxy voting, with the aim of having a positive impact on company behavior. Large shareholders can have a significant impact on company behavior through this strategy. Recently there have been more and more cases of constructive shareholder advocacy and its influence is growing.

In the US, on January 23, 2003, the Securities and Exchange Commission (SEC) voted 4-1 to require mutual funds and investment advisers to disclose their proxy voting policies and voting records. Many believe that this will result in more openness and accountability in the way mutual funds cast their votes, more support for shareholder resolutions on important governance, social

and environmental issues. Funds in the US must disclose their proxy voting guidelines in their registration statements, and disclosure will apply to filings made on or after July 1, 2003.

Community Investment and 'Special Equities'

Community Investment specifically supports community economic development. In the developed world these are projects frequently in an inner city. An SRI mutual fund might allocate 1-2% of its portfolio to community projects, recognizing that the financial return might be lower than an expected traditional return, but believing that this small allocation of capital will not impact the overall return of the fund and will provided much needed funds to a project whose social return is reward enough to compensate for a lower financial return. In developing countries, financing to small businesses (e.g. micro-financing), fair trade and natural energy development would also be included in this category.

Performance of SRI Funds

SRI is a long-term investment strategy focused on long-term outperformance. At the company level, the qualitative factors, such as brand, reputation and management, are increasingly critical to the success of a company. At the macro level, changes taking place in society and the environment, such as population growth, resource use intensity and climate change, will have significant impacts on business sectors in future. SRI investors undertake detailed analysis of these factors when analyzing companies. They look at these issues and take a long-term view of the company's positioning with regard to these micro and mega trends, considering them important components of risk management.

Like any investment strategy, SRI is no silver bullet formula. Nevertheless a critical mass of SRI funds have existed for long enough now to show that performance can be as good as other fund categories. A cursory look at the performance of three of the SRI indices around the world and selected funds in Asia and Australia relative to their benchmark provides evidence of this:

Comparative Performance (as at December 31, 2002)	6 Months	Three years	Five years
FTSE4GoodGlobal Index to FTSE All World	+1.7%	(3.7)%	+ 1.9%
Dow Jones Sustainability Index to Dow Jones Global	(1.1)%	(4.9)%	(1.2)%
Domini 400 Social Index (US) to S&P500 *[*L12M], [** 5 Yr/10 Yr]*	+1.3%*	(2.0)%	0.7%/0.6%**
Median SRI fund (Australia) to S&P ASX 300 Acc. *[June 2002]*	N/A	+ 0.9%	+ 1.4%
Glebe Pan-Asian Trust to MSCI Far East Free Ex-Japan	+12.4%	+19.2%	+40.9%
Kingsway HK SAR Fund to Hang Seng Index *[3 Yr = return since inception on 1/2/02, 6 mth-1 year return]*	(0.3)%	+15.7%	N/A

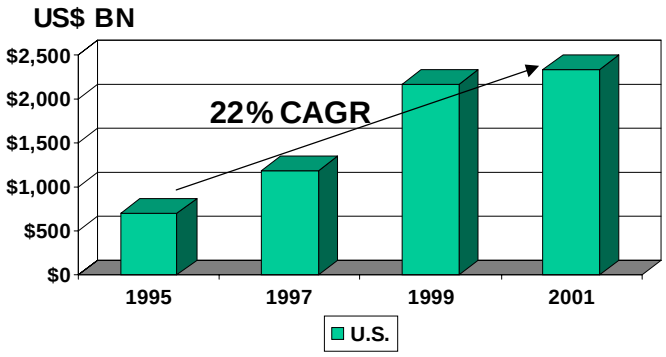
Source: FTSE, Dow Jones, Bloomberg, Ethical Investor, Corporate Monitor

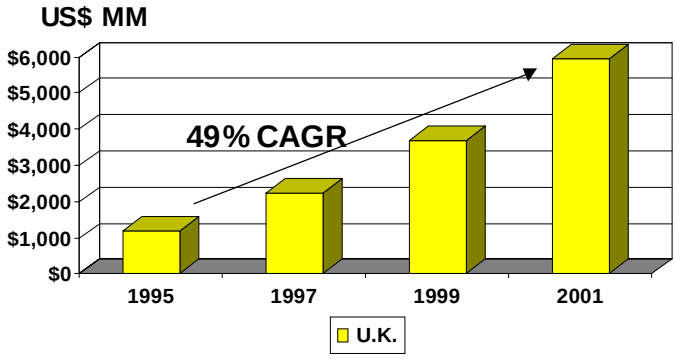
The data is conclusive enough to show that SRI funds can perform at least as well as any other index and investing in SRI funds does not materially inhibit returns. It has been argued that investing in line with SRI criteria restricts the investment universe. It is true to say that the traditional ethical investing model of negative screening does reduce the investment universe by excluding entire sectors. Many studies have been conducted to assess the impact of this on performance. Overall, the conclusion seems to be that volatile Shareholder engagement allows SRI investors to invest in companies that meet certain SRI criteria but may be lacking in others. The SRI investor, through the process of engagement, commits to take

action to encourage that company towards best practice by voting on resolutions or entering into a dialogue with management on a specific issue. This more inclusive approach reduces the investment restrictions associated with the negative exclusion approach. ity of such funds is greater than benchmark indices, but on a long-term basis, performance is as good as these indices. The recent development of 'shareholder engagement' as an SRI strategy counteracts this argument to a certain extent.

SRI Around the World

In the US, at the end of 2001 (the latest data available), US$1 out of every US$8 invested in a fund was in an SRI fund, for a total of US$2.2 trillion. There were 192 funds available. It is estimated that a further US$32 billion is invested in SRI funds in Canada. In the UK, there is an estimated US$250 billion in institutional portfolios and US$6 billion in 67 retail funds with SRI policies. The UK has been one of the highest growth countries for SRI, in part due to an active retail community, in part due to a supportive Government who has contributed to new legislation for pension funds in this area (see below). The size of the market in Europe is unclear, but there is an estimated US$2-3 billion in retail funds.





SRI in Asia

Closer to home, in Australia there is approximately US$10 billion (including church assets) invested in SRI funds and the industry is growing fast. In Japan there is approximately US$1 billion at current market valuations invested in eleven fund options. In the rest of the region several global fund options have been registered for sale and local funds are being initiated.

Five global SRI fund options have been registered for sale and are available in Hong Kong. Notably ASrIA members Henderson Global investors, ISIS Asset Management and UBS Global Asset Management have registered funds for sale in Hong Kong. ASrIA member Morley Fund Management has registered one of its global SRI funds for sale in Singapore. These are global equity portfolios with some Asian companies included in them.

Currently the only provider of Asian SRI fund options in Hong Kong is Kingsway Fund Management, an ASrIA member. Kingsway adopted SRI policies two years ago. Not only early

to the game, the company is also making pioneering efforts to define an SRI strategy with Asian characteristics. One example of how Kingsway is defining its Asian SRI methodology involves gambling: casinos are excluded from most Western SRI funds, but Kingsway has adopted a more flexible approach and does not invest in private casinos, but does invest in company-operated casinos that have mass appeal, give donations and are active in charity work. Kingsway currently provides the only SRI pension option, as part of the Mandatory Provident Fund scheme in Hong Kong.

In Korea, Samsung Investment Trust Management Company launched an environmental fund in August 2002 with the aim of facilitating sustainable development by investing in companies that have progressive environmental management systems or companies that are specifically involved in the business of eco-friendly products and technologies. In Malaysia, Mayban Management Berhad lauched the first Ethical Investment Trust in January 2003. This is a fund that aims to actively invests in socially responsible companies and has a shareholder activism overlay.

The table below shows the SRI fund providers in Asia and the Asian SRI funds available around the world:

Australia AMP Group ANA Friendly Society Australian Ethical BNP Paribas Challenger Group Equity Trustees Glebe Hunter Hall ING Funds IOOF Warrakiri Asset Management Westpac Investment Management	**Japan** Asahi Life Asset Management Daiwa Asset Management Dibj Asset Management Mitsui Marine Asset Management Nikko Asset Management UBS Global Asset Management UFJ Partners Asset Management Yasuda Asset Management **Hong Kong** ABN Amro ISIS Asset Management Generali (fund of funds) Henderson Global Investors Kingsway FM UBS Global Asset Management	**Korea** Samsung Inv. Trust Management Company **Malaysia** Mayban Management Berhad 13 Islamic Funds **Singapore** Morley FM UOB Asset Mgt **Taiwan** UBS **Asian Funds in ROW** AMP Henderson (UK) Ethical Funds (Canada) Glebe (Australia)

As well as these tangible new fund options that have become available, there is a growing community of SRI followers developing around the region. Although the awareness of SRI in the region could not yet be described as extensive, the seeds are sown. The emergence of vibrant NGO communities and significant media coverage of sustainability issues suggest a growing awareness of corporate responsibility. The widespread interest in ASrIA, the large number of 'early' members, the success of the second annual conference in Tokyo last October, the positive media coverage and the thirst from around the region for education about SRI and ASrIA participation in conferences and educational events are also proof that interest is spreading quickly.

The Retail Market: Who Buys SRI Funds?

Although SRI has taken off in the West, some doubt its ability to take off with retail investors in the East. This scepticism is born of the perception that Asia is the home of the day trader. However ASrIA believes there are significant opportunities for SRI to be popular with retail investors in Asian countries.

In Japan, many people said that SRI would not be popular because retail investors 'only care about maximising returns'. Wrong. When Nikko Asset Management launched the first Eco Fund in 1999, a fund that takes ecological and economic considerations into account, plenty of Japanese investors recognised that this was an opportunity to maximise returns as with any other investment vehicle, but to do so in line with their values. They simply had not known about this option before. The fund was expected to attract US$50 million in the first six months, but swiftly attracted US$1 billion.

Nikko representatives comment that the clients were different from the typical unit trust buyers. Many were first time fund buyers. There were also many more women and many more people in the 30-40 age range. This is typical of the profile of SRI retail investors in other parts of the world, but is not typical of the profile of a Japanese retail investor who is generally male, 40+ years old and a regular stock market investor. The Nikko Eco Fund had tapped a whole new pool of funds.

In other parts of Asia, similar to Japan in 1999, most people do not know that this type of investment fund is available. But other Asian countries have many of the same attributes as markets such as the UK and Japan where SRI investing has been immensely popular with retail investors. There are active religious groups, vibrant NGO communities, growing environmental awareness, many people employed in the caring professions, large charities and significant female working populations. In addition there are active cultures of retail investing, yet actual fund penetration remains low, so there is plenty of opportunity to appeal to first time investors who want to invest in line with their values.

The Institutional Market: SRI and Pension Funds

New legislation that requires UK and Australian pension schemes to define their policies on sustainable and responsible investment has had a significant impact on the growth of SRI in these markets. The disclosure was enacted in the UK on 3rd July 2000. Similar disclosure, also incorporating disclosure specifically on labour standards as well as environmental, social and ethical considerations, became effective in Australia on 11th March 2002 as part of the Financial Services Reform Act.

Text of the Amendment to the UK Pensions Act, effective July 2000

The matters prescribed for the purposes of section 35(3) (f) of the 1995 Pensions Act (other matters on which trustees must state their policy in their statement of investment principles) are –

(a) the extent (if at all) to which social, environmental or ethical considerations are taken into account in the selection, retention and realization of investments; and

(b) their policy (if any) in relation to the exercise of rights (including voting rights) attaching to investments.

Other EU countries are now assessing their current legislation in light of SRI. The Swedish State pension scheme has the overall objective expressed in the government bill as follows: "There shall be no economic policy or other economic political objectives. Investment activities shall take environmental and ethical considerations into account without lowering the overall objective of a high return". Recent mandates awarded by the AP7 default fund in the DC plan required managers to screen out 27 companies that had violated UN human rights, child labour, International Labour Organisation and environmental conventions, as well as the convention against bribery and corruption.

In the wake of the introduction of this legislation in the UK, ASrIA's sister organization, the UK Social Investment Forum conducted a survey of pension funds in October 2000 to explore the extent to which SRI policies were now being adopted. The survey covered 171 Statements of Investment Principles from occupational pension schemes. The funds that participated in the survey represented £302 billion in assets and 6.4 million members. The survey showed that 59% of funds representing 78% of assets surveyed were incorporating SRI principles into their investment process, either via the fund manager, or through engagement, or both. Just 14% of funds representing only 4% of assets surveyed stated that they would not take environmental, social and ethical concerns into account. The survey clearly demonstrated an increase in the adoption of SRI policies and a growing concern at the fund management level of the business and investment implications of social, ethical and environmental issues.

However, more recently in July 2002, Just Pensions conducted a survey of 14 large UK Pension funds that manage approximately 20% of the total assets held by pension funds in the UK. The report notes that while the recent legislative amendment has encouraged assessment of the wider issues, at the individual fund level there is still disappointingly poor implementation and practice. The report urges trustees to actively monitor their fund managers in assessing social, environmental, and ethical performance, to keep SRI implementation in line with its policies.

SRI is a relevant investment strategy for pension funds partly because they are the ultimate long-term investors whose role is to provide financial return and social security, but also because of the sheer clout they have due to their size. Pension funds are a force to be reckoned with. With total assets of US$15 trillion according to the 2002 edition of "International Pension Funds and their Advisors", pension funds play a fundamental role in the global economy. Their investments in many companies are so significant, that as Alan Pickering, Chairman of the National Association of Pension Funds in the UK, states, "simply walking away from an underperforming company is seldom an option. Improvement by engagement is increasingly the order of the day." By engaging with them on SRI related issues, pension funds can have the biggest impact of any investor class on the behaviour of corporates around the world.

In Asia, exploration into this area is already being conducted in Japan, and State funds such as those in Singapore, are keeping a close watching brief. Again, to use Alan Pickering's words: "those who care about pensions care about the world". Surely the pensions industry in this region should be caring about Asia's business ethics and environmental and social prospects? Not to do so is likely to undermine the very benefits of security and well-being which pensions aim to provide.

The Future for SRI in Asia

In Asia, business ethics, governance and overall transparency continue to be repeatedly called into question and the environmental and social prognosis for the region is dire. The Asia Development Bank's 2001 Environmental Outlook report described the region's environmental problems as “pervasive, accelerating and unabated”. Asia is home to 57% of the world’s population and according to the World Bank, approximately 2 billion people live on less than US$2 per day. The private sector can have a critical influence on ensuring that pollution levels and resource depletion are adequately controlled. Similarly, the private sector has an important role to play in the provision of healthcare, benefits and pension plans for individuals. The 1998 financial crisis underscored the fact that growth by itself cannot substitute for an effective social safety net and needs to be carefully managed with ethics and social/environmental policies at the fore.

Although the awareness of SRI in the region is not yet extensive, the seeds are sown. Given Asia’s grave environmental and social situation, the early interest in SRI must be nurtured and converted into the sale and purchase of more SRI products specifically invested in Asian companies and therefore encouraging their best practice. The more buyers of SRI funds, the more product will become available. The more product that becomes available, the more dollars will be put to work to encourage responsible business practice by Asian companies, thereby enforcing sustainable economic growth without detriment to Asian societies and the environment.

The recent registration of global funds for sale and the new local initiatives emerging around the region are the start of this new global industry coming to Asia. And this is not a fad. In the US and Europe, the debate has moved on from whether SRI will survive as a strategy, which is now accepted, to whether SRI funds will become obsolete because all mainstream investment analysis will need to take these wider issues into consideration when undertaking this risk analysis.

Retail Hedge Funds

The Hong Kong Approach

By Rory Gallaher and Karen Kaur

Rory Gallaher is a partner with Deacons, the Hong Kong law firm, and Karen Kaur is an Associate with the firm. Their team specialises in licensing, authorization and securities work.

Hedge Fund Guidelines

In May 2002, after a process of consultation which was conducted by the Securities and Futures Commission in Hong Kong (SFC) with industry participants, the SFC issued its long-awaited guidelines which permit hedge funds to be offered for sale to the public in Hong Kong. This is a significant development from the previous position where hedge funds have generally only been able to be sold in Hong Kong in an offer which does not constitute an offer to the public.

On 28 November 2002, the SFC announced the authorization of the first three hedge funds under these guidelines: one fund of hedge funds and two single strategy hedge funds. Concurrently, the SFC also released the Guidelines on Hedge Funds Reporting Requirements and investor educational materials on hedge funds.

Authorization of Hedge Funds

The SFC is empowered under the Hong Kong Securities Ordinance to authorize mutual fund corporations and unit trusts for sale to the public in Hong Kong. Authorization may be granted subject to such conditions as the SFC considers fair and reasonable. The requirements for authorization are contained in the SFC's Code on Unit Trusts and Mutual Funds (Code). The Code does not have the force of law, with the result that the SFC has considerable discretion in implementing or adopting provisions on a case by case basis. Waivers may be granted if an application is supported by appropriate arguments.

The hedge fund guidelines, which now form part of the Code, set out the specific criteria that a hedge fund and its operators must satisfy in order to be authorized. The other provisions in the Code, which are of general application, must also be complied with. The SFC's authorization process has a dual focus -

(i) the SFC reviews the suitability of the operators of the fund, in particular the manager and the custodian; and

(ii) the SFC also reviews the suitability of the fund itself and its offering and constitutive documents.

Suitability of Operators

In looking at the suitability of operators, the suitability of the **manager** is crucial. There are several criteria that the manager must fulfill. First, there are the **general criteria** in the Code that apply to managers of funds seeking authorization in Hong Kong, regardless of whether these funds are hedge funds or not. These require that the manager must be engaged primarily in the business of fund management, have sufficient financial resources to carry out its business and meet its liabilities (a minimum issued and paid-up capital and capital reserves of HK$1 million or its equivalent in foreign currency is required), must not lend to a material extent and must maintain at all times a net positive position.

The Code also requires that the investment management operations of the manager be based in a jurisdiction with an inspection regime that is acceptable to the SFC (an "acceptable inspection regime"). The following are the current acceptable inspection regimes:

Jurisdiction	Regulatory Authority	Notes
France	Commission des Operations des Bourse	Authorized asset management firms
Ireland	Central Bank of Ireland (CBI)	Subject to additional procedures as agreed with CBI
Hong Kong	Securities and Futures Commission	Registered investment advisers
Luxembourg	Commission de Surveillance du Secteur Financier (CSSF)	Subject to additional audit review as agreed with CSSF
United Kingdom	Financial Services Authority	Member firms
U.S.A.	Securities and Exchange Commission	Registered investment advisers

The Cayman Islands, Bermuda, the BVI and the other Caribbean jurisdictions are **not** considered by the SFC to have acceptable inspection regimes, neither are the Channel Islands or Switzerland. As many hedge funds have managers based in these jurisdictions, this can be a major obstacle to getting a fund authorized in Hong Kong.

In addition, the hedge fund guidelines set out **new criteria** that managers of hedge funds must fulfill, namely, a manager must have:-

- at least US$100 million in **hedge fund** assets under management;

- sufficient resources including at least 2 key personnel with relevant experience. "Relevant experience" means for a single strategy fund - at least 5 years' experience in hedge fund strategies in general and 2 years' experience in the relevant strategy of the fund. For a fund of hedge funds, it means 5 years' general hedge fund management experience and 2 years' experience as a fund of hedge funds manager; and

- suitable risk management and internal control systems in place, including, in the case of a fund of hedge funds, a due diligence process for the selection and monitoring of underlying funds.

The SFC has been applying these requirements strictly and requires detailed and specific information demonstrating compliance.

Note that in the case of a fund of hedge funds, while the manager of the fund of hedge funds needs to fulfill all the criteria set out above, the managers of the underlying funds (which do not need to be authorized) do not. The only requirement is that 90% of the underlying funds in which a fund of hedge funds invests must have key personnel with at least 2 years' hedge fund management experience. The managers of the underlying funds do not need to have US$100 million of hedge fund assets under management requirement, nor do they need to be based in a jurisdiction with an acceptable inspection regime. However, the fund of hedge funds' manager will have to submit a detailed compliance plan to satisfy the SFC on how it proposes to monitor the activities of the underlying fund managers on an ongoing basis.

In addition to the potential difficulties that hedge fund managers may face in fulfilling all of the above criteria, a change of approach appears to have occurred within the SFC in its recent reviews of hedge fund applications which exacerbates these difficulties. In the past, when reviewing the suitability of traditional long-only funds, the SFC appeared to take the view that where a manager delegated investment management **discretion** to an investment adviser, the delegate (and not the top-level manager) would need to fulfill the SFC's criteria set out in the Code. Accordingly, the top-level manager of a fund could be based in the Cayman Islands (which is not an acceptable inspection regime) without key personnel with the relevant experience, provided that it delegated investment management discretion of the fund to a suitably qualified manager in an acceptable inspection regime.

However, the SFC's approach in the recent reviews of hedge fund applications appears to be as follows:-

- In general, **all** levels of management with investment discretion must fully comply with all the SFC's criteria, including being based in an acceptable inspection regime and having the requisite key personnel with relevant experience (notwithstanding delegation of investment management discretion).

- However, where the fund is based in a jurisdiction which has regulations requiring that the manager be based in the same jurisdiction as the fund itself (albeit a non-acceptable inspection regime), **and** where the investment management discretion is delegated to a suitably qualified investment advisor <u>within the same group of companies</u>, based in an acceptable inspection regime, the SFC appears to be satisfied with limiting its review to the delegate. It would seem then, that where a particular jurisdiction does not have such a requirement, and the top-level manager is based in that jurisdiction (which is not an acceptable inspection regime), then even if discretionary powers are delegated to a fully qualified investment advisor within the same group of companies, based in an acceptable inspection regime, the SFC will not permit such a structure. This appears to be a significant change of policy, and it is not clear whether the same principles will apply to traditional funds.

- In addition, where the top-level manager delegates investment management discretion to an investment adviser <u>outside the top-level manager's group of companies</u>, the SFC insists that

the both the top-level manager and the delegate fully comply with its guidelines. Here, it appears that the SFC is concerned that managers or fund management groups which are otherwise unqualified to establish authorized retail hedge funds try to circumvent the rules by appointing outside advisors who do have this experience. The SFC is concerned as to the impact on the hedge fund and its investors should such outside advisor resign or be removed by the manager. They have also voiced doubts as to how a top-level manager without the requisite experience can properly monitor risk and ensure compliance by their delegate.

Suitability of the Fund and its Offering / Constitutive Documents

The hedge fund guidelines set out the requirements that the fund itself must fulfill. Some of these requirements are highlighted below.

Minimum subscription. The minimum level of initial subscription in a single hedge fund must be no less than US$50,000. For a fund of hedge funds, the level is US$10,000. There is no minimum subscription level for a hedge fund that provides at least a 100% capital guarantee.

Limited liability. The liability of holders must be limited to their investment in the hedge fund. Where the hedge fund is structured as an umbrella fund, there must be legally enforceable provisions to ring-fence the assets and liabilities between sub-funds.

Performance fees. These must be paid no more frequently than annually and calculated on a high-on-high basis. Note however, that the underlying funds of a fund of hedge funds do not have to comply with this requirement.

Dealing. The fund must provide for at least one regular dealing day per month and the maximum interval between the lodgment of a redemption request and the payment of redemption money to holders may not exceed 90 calendar days.

Investment & Borrowing Restrictions. There must be a set of clearly defined investment and borrowing parameters disclosed. While the SFC has not imposed any investment or borrowing restrictions for single strategy funds, the manager will be required to make appropriate disclosures on the type of investments and strategies it will undertake, the expected degree of diversification or concentration of investments, the expected and maximum level of leverage and the risk factors involved in the strategy employed. In a fund of hedge funds structure, some limited restrictions are imposed to ensure sufficient diversification: a fund of hedge funds must invest in at least five underlying funds with no more than 30% of its total net asset value invested in any one fund. Also, a fund of hedge funds may not invest in another fund of hedge funds.

While the philosophy of the SFC with respect to investment restrictions is generally to permit managers to employ their strategies quite freely provided proper disclosure is made, the SFC has been resistant to allow funds of hedge funds to invest in **managed accounts**. The SFC is concerned that investments in managed accounts may have unknown adverse implications to investors particularly in relation to cross-liability, where the manager is unable to ensure that the liability of the fund of hedge funds is limited to the investment in the managed accounts. The SFC is concerned that liability of the managed accounts may spiral out of control (especially where it

engages in derivatives trading and short-selling) and may have a contagion effect on the entire fund of hedge funds.

Reporting Requirements. An authorized hedge fund will be required to issue annual, semi-annual and quarterly reports to investors. The SFC has issued its Guidelines on Hedge Funds Reporting Requirements that set out the required contents of these reports.

Prime Broker. Where a hedge fund uses a prime broker, the guidelines set out various requirements that the prime broker must adhere to. One issue for most prime brokers has been the limit on the value of the assets which may be charged to the prime broker to secure the fund's indebtedness.

Independent Trustee / Custodian. The hedge fund must have an independent trustee or custodian.

Monitoring of Distribution Agents. The SFC, being mindful that distribution agents who have direct contact with the investing public play a big role in investor education and protection, requires the manager to take all reasonable care in the selection of its distribution agent(s) engaged in the selling of hedge funds and provide all necessary information and training to these agents for the purpose of selling the scheme.

Conclusion

The road to authorisation of hedge funds has not been an easy one thus far. This is hardly surprising as the initial applications are breaking new ground. The SFC has vetted these applications very thoroughly as these products are complex and represent the cutting edge of regulatory development.

There are still a number of applications pending with the SFC, and undoubtedly some which have yet to be submitted. It is hoped that over the next few months, the SFC will authorize further applications so as to enhance investor choice in Hong Kong.

Using the Internet for Corporate Activism

Webb-site.com was created in 1998 by David M. Webb, a former investment banker who has lived in Hong Kong since 1991, and it provides an **independent** commentary on corporate and economic governance, business, finance, investment and regulatory affairs in Hong Kong. *Webb-site.com* is run on a not-for-profit basis.

Also provided is Webb-Guide, a directory of Asian web sites. Webb-Guide is structured to provide easy access for researchers of Asia. Webb-Books (in association with Amazon.com) gives you a hand-picked reading list of financial titles.

Investment banks and brokers are often conflicted from saying what they really think, because their comments would be negative to the companies or government concerned. This is not unique to Asia, it is an industry-wide problem.

These firms get a lot of new issue and advisory business from corporate clients, and they also risk being shut off from information flow if their analysts are too negative on a company. Some analysts have even been fired for negative coverage of a company or government. If a firm offends a government, they are likely to lose future mandates for advising on things like bank restructuring or privatisations, and can even find difficulties with licensing and operating their business.

Webb-site.com, however sees its goals as:

- to increase the transparency and efficiency of free markets and their participants, including companies, governments, regulators and controlling shareholders
- to oppose all forms of cronyism, favouritism or protectionism by governments
- to oppose anti-competitive behaviour by monopolies of oligopolies
- to demand fairer treatment for minority shareholders, to educate and inform them,and promote their participation in corporate decision making

David M. Webb is a retired investment banker. He spent 12 years in the field, the first 5 in London before moving to Hong Kong in 1991. He was a Corporate Finance Director of BZW Asia Limited, conducting equity issues and advisory mandates throughout Asia until 1994, when he became in-house adviser to Wheelock, a local listed conglomerate. He left in 1998 and now spends his time researching the Hong Kong market and editing Webb-site.com. His other roles include:

- member of the Shareholders' Sub-committee of the HKSAR Government Standing Committee on Company Law Reform (2001-)
- member of Hong Kong's Takeovers and Mergers Panel and the Takeovers Appeal Committee (2001-)
- member of the SFC Shareholders Group (2001-)
- member of the Working Group on New Market Development of the Stock Exchange of Hong Kong (1997-1999)
- Non-executive director of AsrIA (2001-)

Webb graduated in mathematics from Oxford University in 1986 and prior to that was a computer geek, writing books on the subject of machine language programming for the Z-80 based Sinclair Spectrum computer. He also wrote a number of best-selling games for the Spectrum and Commodore 64, which were in the first generation of 8-bit home computers.

Project Poll

In a typical Hong Kong General Meeting each resolution is decided on a show of hands (**OPOV**, or one-person-one-vote), and almost all the publicly held shares are represented by a single person from HKSCC Nominees Ltd (owned by HKEx), who raises a single hand on each resolution, while the listed company swamps her with employee-shareholder hands and then declares the resolution "passed" without further ado. All the proxy votes sent in by absent investors are not counted, and nobody knows how many shares would have voted in favour or against each resolution.

One-share-one-vote (**OSOV**) is an essential principle of shareholder participation in corporate governance, and that Hong Kong's system of a show of hands is incompatible with international best practice.

HKEx said that it plans to amend the rules, but in the meantime, Webb intends to force the issue and set an example by introducing polling to the largest companies in Hong Kong.

Webb has acquired 10 shares in each of the companies in the Hang Seng Index, and of course 10 shares in HKEx itself, and has arranged for 5 persons to be a member of each company, each holding 2 shares.

Under Section 114D of the HK Companies Ordinance, 5 members (registered shareholders) of a company, present in person or represented by a proxy, can require a poll to be held. David Webb or another proxy will attend each general meeting of each company and require a poll on each resolution on behalf of the 5 members. Incidentally, if listed companies collude to hold simultaneous meetings Japanese style, then a few volunteers can be called in.

Project Poll is not intended to be disruptive but to improve the transparency of shareholder meetings and the accountability of management. Democracy is cheap. The process of conducting a poll is very simple.
For best practice, the poll should be scrutinised by the auditors, who should certify the results.

That's all there is to it. Incidentally, 5 of the HSI companies are not incorporated in HK. 4 are incorporated in Bermuda, and 1 (HSBC Holdings plc) lives in England, where it holds its meetings. That can be covered too. Section 77(5)(b) of the Bermuda Companies Act requires a poll if demanded by 3 members, and Section 373 of the UK Companies Act has a similar provision for 5 members to demand a poll.

Believe it or not, there's nothing yet in the rules to require the results of a poll to be published, although HKEx has proposed it. So, if companies do not publish the results, *Webb-site.com* will….

Open the doors

Public companies should hold their meetings in a public manner. Non-registered shareowners, or potential investors, have a right to know how a company deals with its shareholders in general meeting. Sadly, most companies in Hong Kong hold their shareholder meetings behind closed doors, with no observers from the media allowed. Webb-site intends to change that too!
Why does each member of Project Poll hold 2 shares, not 1. That is because Section 114C(2) of the HK Companies Ordinance allows each member to appoint two proxies by law, or more than 2 if the Articles of the company allow it. The spare capacity will be used to appoint journalists as proxies to attend the meetings.

Project Vampire

Project Vampire stands for "Vote Against Mandate for Placings, Issues by Rights Excepted". Webb wants all shareholders to vote AGAINST the general placing mandate in each AGM of the 33 Hang Seng Index companies and HKEx itself, and indeed for any other HK-listed companies in which you hold stock.

Pre-emption rights

A pre-emptive share issue is one in which existing shareholders are given a right of first refusal, to maintain their economic and voting rights by subscribing for their share of a new issue, or alternatively to sell their rights in the market. It protects both their voting stake and their economic interests. Anything else is a non-pre-emptive issue.
Any non-pre-emptive discounted issue of shares represents a transfer of value from existing shareholders to the subscribers, or placees. Their gain is your loss.

The "general mandate" rule in Hong Kong allows an issuer to obtain approval from shareholders (including the controlling shareholder) to make non-pre-emptive issues of shares for cash (or for anything else) at any time in the next year, up to a number equal to 20% of the existing issued shares. So for example, a company with 100m shares in issue can issue 20m more. The mandate can be "refreshed" an unlimited number of times each year.

UK issues for cash

Hong Kong has inherited its legal system and listing rules from the UK. The difference is that while the UK has modernised in the last few decades, in many areas HK has barely moved, and HK often diluted UK rules when adopting them, leading to a divergence of standards. In the UK Companies Act, there is a statutory right of pre-emption, so that any issues of shares for cash must be done by rights issue *unless* shareholders disapply those rights by passing a special resolution, requiring a 75% majority of those who vote.
By contrast, in HK, Bermuda and the Cayman Islands, there are no statutory pre-emption rights, and it takes only a 50% majority of votes cast to grant powers to the board to allot shares however they choose. This fundamentally undermines the paramount governance mechanism of the shareholders' meeting, because it allows management to pick and choose the shareholders by allotment of shares.

Management should not choose shareholders, shareholders should.

In the UK, pre-emption rights are only waived in respect of issues for cash which are:

- a maximum of 5% of the company in any one year
- a maximum of 7.5% in a rolling 3-year period
- a maximum discount of 5% to the market price

The UK guidelines on this and other investment matters are driven by the Association of British Insurers and the National Association of Pension Funds. Between them, the members of the two organisations own over half of all UK equities, so issuers almost always comply. The two organisations tend to jointly agree the Guidelines, and their members would normally veto any issuer who dares to go outside the guidelines. That's the key difference to Hong Kong - in the UK, investors can make policy rather than suffer it.

Issue of shares other than for cash

In the case of issues of shares other than for cash, such as shares issued for an acquisition, the UK Guidelines allow for a 5-year mandate to be granted at the AGM for allotment of new shares up to one third of the existing shares, so that the maximum number of new shares amounts to 25% of the enlarged company. This is customarily renewed at each AGM. However, if shares issued for an acquisition are immediately sold in a placing, known as a "vendor placing", then the guideline specifies that the shares must first be

offered to existing shareholders in a "clawback" unless the issue is smaller than 10% of the existing shares and the discount is 5% or less.

A message to listed companies

Listed companies can earn considerable kudos from corporate governance watchers, and probably a re-rating in their share price, if they adopt international best practice and seek a general mandate at the AGM on the following basis:
The mandate to issue shares for cash, other than by a rights issue, shall be in respect of not more than 5% of the issued shares a the time of the mandate
The discount for shares issued other than by a rights issue shall not exceed 5%.
The mandate to issue shares for other purposes, including acquisitions, shall be for not more than 20% of the issued shares

All institutions should vote

While it may be difficult for retail investors to vote via brokers and banks, institutions have no such excuse, because they are professionals and have custodians who are geared up for it. It is suspected that many institutions have not bothered to send votes to AGMs in the past, thinking that it would be a waste of time since proxy votes are never disclosed or counted on a show of hands, and they were right. Another reason would be that many companies have a majority shareholder who determines the outcome anyway.
So don't be surprised if the initial voting turn-outs are pretty low.

Webb-site has said however that institutions who don't vote will be named and shamed. They have a fiduciary duty to their beneficiaries to exercise voting rights - these are not just rights but also responsibilities.

The UK represents the largest source of overseas orders in the HK market at 33% in 2000/01. Hopefully therefore UK institutions, many of whom are members of the ABI and NAPF, will apply the same principles abroad as they do at home, and support Project Vampire by voting against the general mandate, until such time as HK companies meet the UK standards.

Objective

Webb does not expect that Project Vampire will actually overturn the general mandate, because most companies have a controlling shareholder who will push it through. That is not the point. Coupled with Project Poll, he will consider it a success if he can register substantial opposition to the mandate, excluding votes cast by the controlling shareholders. By pressure of investor votes, in the long run, HK regulators will hopefully tighten the Listing Rules which currently permit such mandates.

Editors Note: Shortly after writing this article, we hear that Webb has been successful in getting elected to the board of the HKEx. Congratulations!

Impact of the New Securities and Futures Ordinance on Fund Managers in Hong Kong

By

James Walker

Mark Shipman

James and Mark are partners of Clifford Chance in Hong Kong, and specialise in securities work. The recent revamping of the various securities laws in Hong Kong, pulling them together as one "omnibus" law has interesting ramifications for other jurisdictions in how regulation should be organised.

*The Hong Kong Securities and Futures Ordinance ("**SFO**") came into full force on 1 April 2003. In addition to this, the SFO has also brought into effect other necessary enabling subsidiary legislation.*

The SFO introduces a number of significant changes to the regulation of securities and futures markets in Hong Kong. Of particular relevance to fund managers are the proposed changes to the licensing regime and the regulation of offers of investments. Potentially significant new provisions include: (a) the requirement for overseas managers who actively market in Hong Kong to be licensed; (b) the removal of the restriction on fund managers from charging performance fees; and (c) the introduction of a new "professional investor" definition.

The new legislation consolidates 10 existing ordinances, including the Protection of Investors Ordinance ("**PIO**"), the Securities Ordinance ("**SO**"), the Commodities Trading Ordinance ("**CTO**") and the Leveraged Foreign Exchange Trading Ordinance ("**LFETO**"), (but does not affect the provisions of the Companies Ordinance ("**CO**") relating to the offer of shares and debentures in a company, although amendments to the CO are under review).

Impact of the SFO

Licensing

Under the SFO, a new "single licence" regime is established, and permits a business entity to carry on different regulated activities under the one licence. The nine "regulated activities" are:

- dealing in securities (Type 1);

- dealing in futures contracts (Type 2);
- leveraged foreign exchange trading (Type 3);
- advising on securities (Type 4);
- advising on futures contracts (Type 5);
- advising on corporate finance (Type 6);
- providing automated trading services (Type 7);
- securities margin financing (Type 8[1]); and
- asset management (Type 9).

In future, a Hong Kong fund manager may need a licence covering the conduct of one or more of the following regulated activities:

- Type 1: dealing in securities (where undertaking a fund distribution function);
- Type 3: leveraged foreign exchange trading (where FX transactions are entered into for the account of the portfolio under management);
- Type 4: advising on securities, including issuing analyses or reports for the purpose of assisting a client to make investment decisions in relation to the acquisition or disposition of securities;
- Type 5: similarly, advising on futures contracts; and
- Type 9: providing asset management services, including managing a portfolio of securities or futures contracts for another person.

Under the SFO, "exempt" dealer and "exempt" investment adviser status will not be available. Any person[2] who carries on a business in a regulated activity, or holds itself out as doing so, must be licensed or registered under the SFO. In terms of terminology, authorised financial institutions (that is, fully licensed banks, restricted licensed banks and deposit taking companies regulated by the Hong Kong Monetary Authority ("**HKMA**") under the Banking Ordinance ("**BO**")), must apply to the SFC to become registered as "registered institutions" under the SFO - the BO has been amended for consistency with the SFO. Other persons (i.e. persons who are not authorised financial

[1] Subject to a sole business requirement.

[2] Only corporations may be licensed or registered under the SFO.

institutions) must apply to the SFC to become "licensed corporations". Both "licensed corporations" and "registered institutions" are referred to as "intermediaries" in the SFO.

However, one new provision worth noting is that the licensing requirement is extended under the SFO to catch an overseas person who actively markets (whether by itself, or through another person on its behalf) its own (offshore) services - but not products - to the public in Hong Kong where those services would constitute a regulated activity under the SFO if provided in Hong Kong. Accordingly, it will be necessary to review the activities of overseas affiliates that target their services at Hong Kong customers.

Licensing Exceptions

The SFO introduces a helpful new exception to the licensing requirement where advice on securities (Type 4) or futures contracts (Type 5) or the provision of asset management services (Type 9) is provided *solely* to 100% owned group companies.

Some of the exceptions contained in LFETO have been brought through to the SFO, including the "class" exception, under which persons who satisfy certain requirements in relation to average transaction size or where the principal business is not in leveraged foreign exchange spot transactions and who also satisfy minimum credit rating requirements may be exempted from the licensing requirement on notification to the SFC. Also, to the extent that a fund manager enters into foreign exchange transactions in the course of operating a unit trust or mutual fund corporation (now termed, under the SFO, a "collective investment scheme") authorised by the SFC will not require a licence to undertake Type 3 activities. Unlike under LFETO, the SFO does not require "leveraged foreign exchange trading" to be the sole business of the licensed corporation in order to obtain a licence to carry on Type 3 activities and so, if relevant, a Hong Kong fund manager can now seek to be licensed to conduct Type 3 activities rather than having to rely on exemptions.

A person who is licensed for Type 9 (asset management) activities may buy and sell securities (or futures contracts), without being licensed to conduct Type 1 (or Type 2) activities, provided that the dealing is performed *solely* for the purposes of asset management. This exception is not, however, available where the manager undertakes a fund distribution function, which will generally require the manager to hold a licence permitting it to conduct Type 1 activities - although this is subject to on-going discussion with the SFC.

Personnel

In terms of complying with the licensing requirements, a fund manager licensed to conduct regulated activities under the SFO will have to ensure:

- each individual executive director (a director of the fund manager who either actively participates in or is responsible for directly supervising the business of a regulated activity for which the fund manager is licensed) is approved by the SFC as a "responsible officer";

- not less than two individuals, at least one of whom is an executive director, of the fund manager are approved by the SFC as responsible officers of the fund manager in relation to *each* regulated activity it is licensed to conduct;

- all investment management staff (those who would, under the SO, be registered as representatives) and responsible officers of the fund manager are registered as licensed representatives accredited to the fund manager.

Financial Resources

With the introduction of the single licence regime, licensed corporations will be able to engage in a number of different regulated activities[3] through one corporate vehicle, hopefully reducing costs and administrative burdens. In terms of the financial resources requirements for licensed corporations, a licensed corporation, generally, must have and maintain at all times the required amount of paid-up share capital and liquid capital which is applicable to it as set out in the SFC's Financial Resources Rules (or FRRs). Where a corporation is a licensed for more than one regulated activity, the highest amount for the different regulated activities must be maintained. It is not necessary to aggregate the different monetary requirements for the different regulated activities.

Transitional Provisions

Generally, a company which immediately before the commencement of the SFO held a licence (or was an exempt dealer or exempt investment adviser) under the SO is deemed to be licensed under the SFO for up to two years (during which time it must formally apply to obtain a new licence under the SFO).

Generally, a director of a licensed corporation who, immediately before the commencement of the SFO, was licensed under the SO (i.e. the active directors) is now considered for the two year transitional period to be licensed as a representative of that corporation and approved as a responsible officer of that corporation under the SFO. Similarly, any other individual who, immediately before the commencement of the SFO, was registered under the SO as a representative of the licensed corporation is deemed for the two year transitional period to be registered as a licensed representative of the corporation under the SFO.

[3] The exception to this is Type 8, securities margin financing, for which there remains a sole business requirement.

Offers of investments

Part IV of the SFO establishes the regulatory framework for marketing investment products to the public in Hong Kong. While the principles under Part IV of the SFO broadly mirror those under the PIO (and the SO), the terminology and defined terms used in the SFO are quite different from those used in the PIO (and the SO). The SFO introduces (amongst others) the new concept of "collective investment scheme", which is defined to cover a wide range of vehicles, including limited partnerships, open and close ended corporate funds and funds structured as unit trusts.

The SFO retains the exception to the general prohibition on the marketing of investment products; namely, the "professional investor" exception. However, the definition of "professional investor" in the SFO is very different from that contained in the PIO as it sets out an exhaustive list of investors who are categorised as professionals, including intermediaries, authorised financial institutions and insurance companies. The SFC has also introduced in the Securities and Futures (Professional Investor) Rules, an extension to the categories of persons who fall within the definition of "professional investor" in the SFO to include additional categories, including:

- trustee companies with at least HK$40 million in assets;
- high net worth individuals with a portfolio of at least HK$8 million; and
- a corporation or partnership with either a portfolio of at least HK$8 million or not less than HK$40 million in assets.

The classification of these categories should give more certainty as to the types of investor who may buy interests in collective investment schemes, and other investment products, on a "private placement" basis in Hong Kong.

As mentioned above, the regulatory regime under the CO is not affected by the SFO and, therefore, continues to apply to the offer of shares and debentures in a fund structured as a company, but not to offers of interests in a limited partnership or units in a unit trust. Importantly, the CO definition of "professional investor" includes "persons whose ordinary business involves the acquisition, disposal or holding of securities, whether as principal or agent". This exception is more restrictive than the exhaustive SFO "professional investor" test. In light of the discrepancy, where a fund is structured as a corporate entity, care will need to be taken to ensure that the investors targeted in Hong Kong do not fall between the "gap" in the two regimes, at least until the CO is amended to close this "gap".

Performance Fees

The restriction contained in the SO on registered and exempt investments advisers charging performance related fees has not been retained in the SFO. Accordingly, fund managers will not under the SFO be restricted from charging performance fees (in addition to their regular management fees).

Finally, the message to fund managers in light of the new legislation is simple: "don't panic!" While some significant changes have been introduced by the SFO in areas that fall beyond the scope of this article, for the whole, the regulated activities that will give rise to licensing obligations on the part of fund managers match closely those that currently prevail. In a positive way, the SFO introduces much welcomed clarity as to the meaning of "professional investor", an advance that will be particularly worthwhile when the CO is amended to mirror the new SFO definition.

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SPECIAL FEATURE—Global Investment

Global Equity Investment in a Borderless World
—From Country Factor to Global Industry Factor—

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This paper breaks down the risks of global equities into several categories including country and global industry factors, and estimates the influence of each category. The analysis finds that the global industry factor increased in influence from 1994 to 2000, which was not so evident previously. This trend is obvious in large capital stocks, developed countries, and multinational firms, showing this factor to be essential for the analysis of company fundamentals. In active portfolio management, given similar prediction ability, the higher return the volatility of a sake factor, the higher the return. Therefore, global sector allocation is expected to be more important in investment strategy. On the other hand, emerging countries are still considerably affected by the country factor, much less by the global industry factor. With respect to investment in emerging countries, it is reasonable to maintain a conventional country allocation approach.

The result of the analysis of the shareholding ratio of Japanese stocks by foreigners indicates that information with respect to the country factor might be "asymmetrical" between domestic and foreign investors. This is evidence for the theory that a home asset bias may be caused by investors acting reasonably, based on this information asymmetry.

1. Introduction

World capital markets have changed considerably due to the increase in borderless economic activities and global investors now need to adjust their management methods and organizations in line with these market changes.

One of these changes is a deterioration in the effectiveness of globally diversified investment. In other words, the correlation among stock markets in countries around the world has increased. Institutional investors in Europe and the U.S. expanded global investment from the late 1980s to the early 1990s to reduce risk by diversifying investment, taking advantage of the low correlation between domestic and foreign stock markets. However, increasing correlation between world stock markets has become evident through such incidents as the crises in Asia and Russia. Both cases reveal the highly interlocked nature of the world's stock exchanges. Consequently, diversified investment has lost the effectiveness it had in the early stages of the introduction of global investment[1]. Some now view with skepticism the usefulness of global investment in reducing risk.

Many empirical studies have been made to identify the factors that contribute to the effectiveness of diversified investment. In these studies, returns from individual issues on stock markets around the world are interpreted according to the particular stock market's characteristics (country factor) or the global industry factor (industry factor[2]). Most of these studies found that variations in stock returns could be attributed to the country factor. It is also reported that even multinational firms are influenced

relatively little by the global industry factor. The country factor has had a low correlation because economic cycles, financial and accounting policies, etc. have been independent. However, the introduction of the euro in 1999 brought financial consolidation and integration of the financial policies of European countries, and this has led to expansion of the financial markets. Under these circumstances, the uniqueness of respective countries might have faded sufficiently to decrease the influence of the country factor, thereby increasing correlation among individual countries.

There have been some changes in the investment strategy of institutional investors. In the past, the typical process of global management was as follows: first, country allocation was effected, was followed by the building of a country portfolio. Nowadays, such investors make a global (or regional) sector allocation, and then choose individual stocks in the subject sector[3].

Given a similar prediction ability (correlation between information and return), the higher the volatility of a stake factor, the higher the return. If the country factor is stronger than any other factor, management should be centered on country allocation. In light of this, the emergence of sector allocation investor suspects that the industry factors have come into focus.

Either of the changes apparently indicates the change in the influence that the country and industry factors have on stock price variation. This paper breaks down the respective returns by issue in stock markets around the world by factor, including country and industry. In Chapter 1, these factors are discussed, considering changes in each factor's characteristics and the causes of these changes. Chapter 2 explains the data used in this paper. Chapter 3 explains the method of analysis. Chapter 4 considers changes in the characteristics of country and industry factors, which is the theme of this paper. Chapter 5 discusses open issues on the subject of global investment.

2. Data

The individual stocks constituting the FTSE All World Index are used as the basis for this analytical study. The Index covers 2,300-plus issues in 49 countries, including emerging markets (Table 1).

The Global Classification System of FTSE is also employed for the classification of industries. In this classification, there are the top-class groups, which are the 10 Economic Groups, 39 Industrial Sectors, and 102 Industrial Sub-sectors. In addition, 39 Industrial Sectors are used to calculate the industry factor.

The period of analysis is from January 5, 1994 to the end of December 2000. To cover chronological change in market characteristics, the samples were divided and analyzed by year. Data was collected weekly to obtain sufficient samples for a period. The closing quote on Wednesday was set as the reference point to eliminate the influence of holidays as much as possible. Return from individual issues, an explained variable, is on a local currency basis[4]. The explained variables included the major four currencies (the US dollar, Japanese yen, euro <before 1999, the German mark>, and British pound). To eliminate the influence from the introduction of the euro, data from the last week of 1998 was excluded.

3. Analytical Method

3.1 Multi-factor Model

The return from stock i belonging to industry k in country j is assumed to follow the multi-factor model expressed in equation (1).

$$R_{it} = \alpha_i + \beta_i^M M_t + \beta_i^C C_{jt} + \beta_i^I I_{kt} + \sum_{l \in \{\$, ¥, £, Euro\}} \beta_i^{FXl} FX_{lt} + \varepsilon_{it} \qquad (1)$$

Where,

R_{it} is the local currency return of instrument i during period t. For the world stock market factor, the dollar return of the FTSE

1. Uppal (2001) made a model of risk that the returns from stock markets around the world would fall simultaneously upon occurrence of a financial crisis, according to the jump diffusion model. The influence on portfolio selection by an investor was estimated in the model. Uppal concluded that a very small degradation would be caused in the effectiveness of the investor by ignoring the systemic risk would be small.
2. See Lesard (1974), Roll (1992), Heston and Rouwenhorst (1994), and Griffin and Karolyi (1995).
3. Cavaglia, Cho and Singer (2001) made a model of regional risk sector allocation, which had been popular among investors. They showed the relationship between the regional sales volume of a company and the industry factor.
4. In this analysis we assumed the influence from ignoring the risk-free interest rate is small.

Table 1 Countries Comprising the FTSE All World Index

Developed Countries	No. of Issues	Capitalization for Investment (MM $)	Weight	Region
US	522	11,873,727	51.78%	America
Japan	343	2,425,081	10.58%	Asia Pacific
UK	148	2,252,533	9.82%	Europe
France	55	1,033,046	4.50%	Europe
Germany	41	760,948	3.32%	Europe
Switzerland	26	636,175	2.77%	Europe
Netherlands	20	541,101	2.36%	Europe
Canada	95	535,551	2.34%	America
Italy	45	505,064	2.20%	Europe
Hong Kong	54	305,201	1.33%	Asia Pacific
Spain	21	265,342	1.16%	Europe
Australia	72	258,999	1.13%	Asia Pacific
Finland	12	245,959	1.07%	Europe
Sweden	34	243,692	1.06%	Europe
Belgium/Luxemburg	22	113,519	0.50%	Europe
Singapore	42	94,544	0.41%	Asia Pacific
Denmark	28	77,818	0.34%	Europe
Greece	76	65,658	0.29%	Europe
Ireland	14	65,115	0.28%	Europe
Portugal	14	43,990	0.19%	Europe
Norway	37	35,471	0.15%	Europe
Austria	20	18,688	0.08%	Europe
New Zealand	19	12,377	0.05%	Asia Pacific
	1760	22,409,601	97.72%	
All World Index	2304	22,931,957	100%	

Advanced-emerging Countries	No. of Issues	Capitalization for Investment (MM $)	Weight	Region
South Africa	53	95,776	0.42%	Middle East and Africa
Brazil	41	75,102	0.33%	America
Mexico	18	72,434	0.32%	America
Taiwan	40	63,517	0.28%	Asia Pacific
South Korea	27	60,773	0.27%	Asia Pacific
Israel	25	19,349	0.08%	Middle East and Africa
	204	386,950	1.69%	

Emerging Countries				
Malaysia	31	24,070	0.10%	Asia Pacific
India	29	18,752	0.08%	Asia Pacific
Russia	9	13,502	0.06%	Europe
Chile	21	12,909	0.06%	America
Turkey	27	11,349	0.05%	Europe
Poland	24	8,868	0.04%	Europe
Indonesia	25	7,335	0.03%	Asia Pacific
Philippines	22	6,883	0.03%	Asia Pacific
Thailand	30	5,996	0.03%	Asia Pacific
Hungary	8	5,175	0.02%	Europe
Argentina	12	4,683	0.02%	America
Czech Republic	6	2,991	0.01%	Europe
Egypt	18	2,982	0.01%	Middle East and Africa
China	35	2,814	0.01%	Asia Pacific
Peru	9	2,071	0.01%	America
Morocco	8	1,955	0.01%	Middle East and Africa
Venezuela	6	1,083	0.00%	America
Pakistan	10	1,044	0.00%	Asia Pacific
Columbia	10	945	0.00%	America
	340	135,906	0.59%	

Source: FTSE
Note: as of January 1, 2001

All World Index is used. C_{jt} is the country factor. I_{kt} is the (global) industry factor. For this, estimated values were obtained using a cross-sectional regression analysis, which is described later. Taking Toyota as an example, the country factor is Japan, and the factor return of the automobile and auto-parts sector is employed as the industry factor. FX_{lt} represents foreign exchange return volatility[5]. Local currency volatility against key currencies, the yen, US dollar, euro (before 1999, the German mark), and pound, are used. (ε_{it} is the indiosyncratic return for a company. β_i^X is sensitivity to each term x.

3.2 Estimating the Country/Industry Factor

Equation (1) contains unknown elements, such as sensitivity β_i^X, country factor C_{jt}, and industry factor I_{jt}. The estimation method for C_{jt} and I_{jt} is explained first.

In the first step, time series data from 51 to 52 weekly data samples is used. They are estimated using time series regression analysis (OLS) in Equation (2), from which country and industry factors have been removed:

$$R_{it} = \alpha_i + \beta_i^M M_t + \sum_{l \in \{\$, ¥, £, Euro\}} \beta_i^{FXl} FX_{lt} + u_{it} \tag{2}$$

The residual return is obtained by subtracting the world stock factor and the currency exchange factor from the return of the specific instrument: ($\hat{r}_{it} = \hat{\alpha}_t + \hat{u}_{it}$).

Second, country and industry factors are estimated in Equation (3) using dummy variables and a cross-sectional regression analysis. The dummy variables are 1 for the instrument attributed country or industry and 0 for another country or industry. In fact, country beta and industry beta in Equation (1) are not always 1. However, each beta is averaged at 1 on a definition basis. Therefore, this is considered a regression that uses a variable that includes an observation error ($d_{ij}^X = \beta_{ij}^X + s_{ij}^X$($s_{ij}^X$: observation error at the average zero). Such OLS estimated volume including the variable error is not always constant. As a solution, Equation (3)

5. When estimating the global industry factor, it is important to remove the impact of the currency rate. In addition to this method, there is a method using the dollar or the yen as the reference currency for the return. There is also another method using a full-hedge return. This is because a company's currency exposure is not always . Thus, when estimating C_{jt} and I_{kt}, the impact from key currencies was neutralized in this paper.

employs the generalized moment method, which uses stock market capitalization[6] as the instrument variable.

$$r_{it} = \alpha_i' + \sum_{j=1}^{48} d_{ij}^C C_{jt} + \sum_{k=1}^{38} d_{ik}^I I_{kt} + \varepsilon it' \tag{3}$$

$$r_{it} = \sum_{j=1}^{48} d_{ij}^C C_{jt}' + \sum_{k=1}^{37} d_{ik}^I I_{kt}' + \varepsilon it' \tag{4}$$

Equation (3) has complete multicolliniality. The estimation is actually made by Equation (4). The individual values are estimated again under the definition (Equations (5) and (6)) that the weighted average of the market capitalization of country and industry factors is 0 in respective sections.

$$\sum_{j=1}^{48} w_{ji} C_{jt} = 0 \tag{5}$$

$$\sum_{k=1}^{38} w_{kt} I_{kt} = 0 \tag{6}$$

3.3 Estimation of Factor Beta

Through chronological regression analysis (OLS), the beta of Equation (1) is estimated for each instrument. The data samples used here are annual data, which is the same as with the first time series regression.

The proportion of the factor ratio making up the following risks (variance) is defined per instrument on the result of the regression analysis and the respective factor returns. (If there is some correlation between the factors, the total will not be equal to 1.)

$$\text{(World market factor ratio)} = \frac{var(\beta_i^M M_t)}{var(R_{it})}$$

$$\text{(Country factor ratio)} = \frac{var(\beta_i^C C_{jt})}{var(R_{it})}$$

$$\text{(Industry factor ratio)} = \frac{var(\beta_i^I I_{kt})}{var(R_{it})} \tag{7}$$

$$\text{(Currency factor ratio)} = \frac{var\left(\sum_{l_g(\$,¥,£,Euro)} \beta_i^{FXl} FX_{lt}\right)}{var(R_{it})}$$

$$\text{(Instrument factor ratio)} = \frac{var(\varepsilon_{it})}{var(R_{it})}$$

The country factor and industry factor ratios are discussed later, focusing on comparison of the two ratios.

The size of the respective factor ratio defined by Equation (7) demonstrates the relative importance of the respective factor ratios in the variation of the return for a specific instrument. To make an investment decision regarding a specific instrument, it is more important to predict the large factors rather than the small ones that influence the ups and downs in the return. When inspecting an instrument where the industry ratio is higher than the country ratio, industrial globalization trends should be the focus. In light of this, the relative extent of both the country factor and industry factor ratioa is considered a reference in measuring the progress of globalization. A global company is defined for the discussion that follows in this paper as an instrument with a large industry factor ratio and a low country factor ratio.

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6. As pointed out by Suwabe (2000), who saw the relation between country and industry beta and market capitalization, equity market capitalization is selected as an instrument variable. Regarding the "errors in variables" issue, see Greene (1999) and Madara (1996).

4. Changes in Factors Affecting Stock Price Variation

4.1 Analysis of Country/Industry Factors

First, consider the chronological changes in the volatilities of the country factor return (C_{jt}) and the industry factor return (I_{kt}) estimated by cross-sectional regression analysis.

Table 2 summarizes changes in the annualized converted standard deviation of the country factor return (C_{jt}). Table 3 shows the same for the industry factor (I_{kt}). This table also summarizes the results of the equal variance test of the data for 2000.

Some peculiarities are observed in the country factor. No chronological increase or decrease trend is observed in the volatility level. For example, when a special event such as a financial crisis in a concerned or correlated country occurs, volatility temporarily increases. This is applicable to the Mexican crisis of 1994, the Asian crisis of 1997, the Russian crisis of 1998, the Brazilian crisis of 1999, etc. The advanced-emerging countries have been observed to exhibit a tendency of higher volatility in the country factor than developed countries. For example, the average standard deviation was 12.9% in developed countries,

Table 2 Chronological Changes in Country Factor Standard Deviation

	1994	1995	1996	1997	1998	1999	2000
Australia	5.9‡	8.8	8.5	10.4	10.3	8.3	9.2
Austria	9.3	11.0	8.6	10.0	12.6	11.2	10.7
Belgium/Luxemburg	7.7‡	7.5‡	7.6‡	12.7	11.9	14.7	11.7
Canada	7.2	6.9	5.1‡	5.6‡	7.8	6.8	8.3
Switzerland	9.1	6.5	8.3	9.3	13.9‡	9.0	8.1
Germany	10.4	8.7	6.0‡	9.9	10.4	10.0	10.4
Denmark	10.4	8.3‡	6.4‡	10.4	13.1	10.4	12.3
Spain	12.1	10.7†	9.5‡	13.6	13.0	12.6	14.8
Finland	14.0	14.6	9.9†	10.8	15.6	11.4	13.9
France	9.0	7.7	5.5‡	10.2	10.5	8.6	8.8
UK	8.0	6.6	5.4‡	7.1	8.1	7.8	7.8
Greece						26.5	30.5
Hong Kong	16.4	13.7	10.0‡	18.5	26.4‡	18.0	16.4
Ireland	8.9‡	7.6‡	6.7‡	9.3‡	12.8	12.0	14.5
Italia	17.1	13.8	12.0	16.7	18.8	14.1	14.6
Japan	8.7‡	10.7	10.0	15.1	20.0‡	12.5	13.0
Netherlands	7.6†	7.5†	7.9	11.2	14.6†	13.1	10.3
Norway	13.1	11.4‡	8.9‡	10.9‡	15.9	11.0‡	16.7
New Zealand	8.9‡	10.1	9.8†	13.6	16.9	13.7	13.2
Portugal						20.4	16.6
Singapore	13.9	12.8	10.7†	18.8	27.6‡	22.7‡	14.6
Sweden	13.2	9.8†	9.3‡	9.2‡	14.5	11.5	14.0
U. S.	5.6	5.0	5.0	4.1†	5.6	4.4	5.7
Average of developed Countries	10.3	9.5	8.2	11.3	14.3	12.6	12.9
Total Average	13.9	13.9	11.4	16.0	20.2	18.0	18.2

	1994	1995	1996	1997	1998	1999	2000
Brazil		21.4	10.5‡	22.8	24.8	30.1†	22.0
Israel	22.2	20.0	14.9	17.5	14.7	11.6‡	19.0
South Korea	16.6‡	16.3‡	16.7‡	30.8	33.0	28.0	27.1
Mexico	25.5	23.5	13.3‡	16.2	19.5	19.3	20.3
Taiwan	17.5‡	17.3‡	15.7‡	19.5‡	18.1‡	22.5	28.4
South Africa	12.1	11.6	11.4	14.0	16.8	14.6	14.6
Avg. of advanced-emerging Countries	18.8	18.4	13.8	20.1	21.1	21.0	21.9
Argentina	23.0	24.2	17.9‡	20.9†	26.4	25.7	27.6
Chile	16.4	19.4	12.6‡	14.2	22.7	17.9	18.1
China	17.3‡	11.2‡	13.4‡	27.6	30.3	33.2	30.0
Columbia	19.7	15.9	12.4‡	16.4	24.6	25.3	20.2
Czech Republic				13.3‡	16.3	15.6†	20.6
Egypt					17.9	22.2	17.5
Hungary					30.1‡	17.1	19.7
Indonesia				20.9	25.3	27.3	23.8
India	16.1‡	20.1	19.2	22.6	25.9	24.0	23.5
Morocco				14.3	10.9†	14.0	14.7
Malaysia	19.7	20.3	12.4‡	25.4	33.4‡	28.1	22.6
Pakistan	19.1‡	23.5‡	21.4‡	25.7†	37.7	32.4	34.3
Peru	17.6	19.8	16.0	16.1	23.6‡	12.8	15.5
Philippines				20.5	25.9	20.2	21.2
Poland	21.3	23.5	17.9	21.1	23.9	15.8‡	22.7
Thailand		19.7†	17.3‡	25.5	24.9	29.1	27.1
Turkey	20.3‡	21.9‡	18.2‡	23.6‡	35.7	32.6	37.8
Venezuela				21.6	32.8‡	26.8	21.8
Russia					32.0	28.4	28.2
Avg. of emerging Countries	18.6	20	16.2	20.6	26.6	23.8	23.8

Notes: Figures should standard deviation calculated from weekly data and then converted to an annual percentage rate. † = the null hypothesis is rejected with a significance level of 5% as the result of the equal variance test. ‡ = a significance level of 1%.

Table 3 Chronological Changes in Industry Factor Standard Deviation

	1994	1995	1996	1997	1998	1999	2000
Mining	10.7	10.5	9.4‡	12.5	15.3	13.7	13.6
Oil & Gas	4.9‡	4.5‡	5.9‡	7.8‡	10.4†	13.7	14.4
Chemicals	3.2‡	3.1‡	2.9‡	3.6‡	5.1‡	6.7‡	10.3
Constr/Bldg Mats	2.8‡	3.5‡	2.0‡	4.9‡	5.8‡	6.8	8.8
Forestry&Paper	5.0‡	7.5‡	6.3‡	7.7‡	10.6‡	12.8	15.8
Steel&Oth Mets	4.0‡	5.6‡	4.7‡	5.8‡	7.2‡	11.5	11.3
Aerospace&Defense	4.3‡	5.2‡	6.1‡	7.9‡	9.8†	10.1†	14.1
Conglomerate	1.8‡	2.0‡	1.9‡	3.4‡	4.4	5.6	5.8
Electronic&Electrical Equipment	3.0‡	3.7‡	3.1‡	4.9†	6.4	6.2	6.5
Eng&Mach	2.6‡	3.0‡	3.2‡	3.4‡	6.1†	8.0	8.7
Automobiles	3.3‡	3.5‡	3.1‡	4.6‡	5.8‡	5.8‡	8.6
Household Goods&Textiles	2.9‡	2.4‡	2.2‡	3.1‡	4.6‡	5.4‡	8.4
Soft Drinks	2.9‡	3.3‡	3.0‡	4.5‡	5.9‡	4.6‡	9.0
Food Procs/Prods	2.1‡	3.0‡	2.1‡	3.9‡	4.9‡	4.7‡	7.6
Health	5.0‡	7.3‡	7.3‡	6.1‡	7.3†	8.2	10.6
Packaging	6.1‡	6.6‡	6.7‡	7.3‡	10.8	11.0	14.4
Personal Care & Household Products	4.0‡	4.9‡	4.5‡	5.8‡	8.5‡	8.2‡	15.6
Pharmaceuticals	4.1‡	3.9‡	3.5‡	5.1‡	5.3‡	6.7‡	10.8
Tobacco	6.2‡	6.1‡	7.1‡	8.6‡	8.0‡	8.3‡	12.4

	1994	1995	1996	1997	1998	1999	2000
Distributors	3.6‡	4.1‡	3.2‡	5.9	7.7	6.9	6.7
Gen Retail	4.0‡	3.5‡	4.8‡	4.5‡	6.6†	6.7†	9.3
Leisure, Ent&Hotels	4.4	3.5‡	4.2	5.5	6.4	5.8	5.4
Media&Photo	3.0‡	2.9‡	3.0‡	3.4‡	4.9‡	7.3‡	10.7
Restaurants and Pubs	9.7‡	9.1‡	10.6‡	9.5‡	11.4‡	10.2‡	18.2
Support Services	4.1‡	4.8‡	4.9‡	6.6†	8.4	6.9†	9.1
Transport	2.9‡	2.8‡	2.5‡	3.7‡	4.5‡	5.1‡	8.6
Food&Drug Retailers	3.7‡	3.8‡	3.8‡	5.1‡	7.1‡	8.1†	11.1
Telecom Services	4.5‡	4.0‡	3.2‡	4.8‡	5.9‡	7.1‡	11.3
Electricity	6.2‡	5.0‡	4.8‡	5.3‡	7.6	7.1†	10.0
Gas Distribution	5.7‡	5.9†	5.5‡	6.8	9.5	7.5	8.3
Water	14.9						15.8
Banks	3.1‡	3.3‡	3.2‡	4.2‡	4.3‡	6.1‡	9.5
Insurance Brolers	4.1‡	3.5‡	3.5‡	4.7‡	4.7‡	5.8‡	11.1
Life Assurance	4.8‡	4.6‡	4.3‡	6.3‡	6.9‡	7.4‡	11.2
Investment Companies	4.2‡	3.5‡	2.9‡	3.9‡	5.3‡	5.4‡	8.4
Real Estate	4.0‡	3.5‡	3.2‡	4.5‡	5.0‡	5.9†	8.1
Other Financial	3.4‡	3.9‡	3.0‡	4.1‡	6.4	7.0	8.2
Information Technology Hardware	5.2‡	8.2‡	8.4‡	11.2†	9.8‡	12.0	15.3
Software and Computer Services	8.6‡	6.6‡	7.6‡	7.5‡	10.0	10.5	13.1

Notes: Figures show standard deviation calculated from weekly data and then converted to an annual percentage rate. † = the null hypothesis is rejected with a significance level of 5% as the result of the equal variance test. ‡ = a significance level of 1%.

23.5% in emerging countries.

The volatility of the industry factor has been clearly observed to be on the increase. The hypothesis of equal variance has been clearly rejected in almost all sectors, except a few such as mining and retail. The total average has more than doubled from 4.7% in 1994 to 10.7% as of 2000.

As mentioned above, the (global) industry factor has been clearly observed because of the advancing globalization of corporate activity. In the event of some surprise news in a sector, the return of the sector's companies would be impacted in the same direction under global competition. Consequently, the return on individual stocks of the same industry in different countries and would correlate. This correlation is extracted as an industry factor. Taking the automotive sector as an example, the news of reduced sales of automobiles in North America should have a negative impact on other auto companies that have a share of that market. However, this phenomenon may not be sufficiently accounted for by the globalization of corporate activity, because the globalization of corporate activity is not new. Many companies make a large portion of their earnings on foreign soil.

The second hypothesis is the influence of the globalization of investment behavior. In other words, the industry factor has come into focus because the key role of valuation has been transferred from domestic to global investors. The globalization trend in investment behavior has been growing stronger. Many investors have become involved in active management through sector allocation across countries. International M&A has increased more than ever. Suppose, for example, that there are two companies in different countries, and their cash flow is highly correlated. If the values of the respective individual stocks were determined by domestic investors (in completely separate markets), these individual stocks might not have a common factor as the result of the effect of investors or differences in the investment parent population. If the markets were completely integrated, investors would acknowledge that both companies were almost the same with a high correlation between them.

Actually, it is reasonable to assume that the (global) industry factor has come into focus as the result of the combined effects of the first and second hypotheses rather than the single effect of one or the other.

4.2 Analysis of Country/Industry Betas

The sensitivity of individual stocks differs even within the same country. Sensitivity to the global industry factor also differs between a company doing global business and a company doing domestic business in the same sector. This section analyzes the differences in the sensitivity (beta) to country and industry factors per instrument attribute.

Country beta and industry beta are regressed with the regionall dummy (America, Europe, Asia-Pacific, and Middle East and Africa), the developed country dummy, the instrument dummy constituting the FTSE multinational index [7], and the logarithm of market capitalization (normalized an the average 0 and standard deviation 1) (Equation (8)). The regression is made for each year.

$$\beta_i^{Corl} = \alpha + \sum_{j \in \left\{ \substack{America,\ Europe \\ Asia,\ Africa} \right\}} b_j\, \delta_i^j + b_D\, \delta_i^{Developed} + b_{MN} \delta_i^{\substack{Multi \\ national}} + b_{cap} \log\,(Market\ Cap) + \varepsilon_i \tag{8}$$

Table 4 presents the result of the regression of the country beta, and Table 5 those of the regression of the industry beta.

First, consider the results of the regression analysis of the country beta. As defined, the average of the country beta by country is 1. Study of the regional dummy and the developed country dummy is omitted. Every regression coefficient of the multinational dummy is positive, and at a statistically significant level in 1995 and 1996. These results do not always point to a permanent relation. On the other hand, every regression coefficient of the capitalization log is negative. All but that of 1999 are significant (at a significance level of 5%). The country beta in 1999 is near the statistically significant level. Therefore, there is a tendency for the country beta to decline (indicating that the country factor has less influence) as a company's size increases.

Next, consider the results of the regression analysis of the industry beta. In Europe and Asia Pacific, every regression coefficient to the regional dummy was significantly smaller than 1, with the exception of 1995. Every regression coefficient of the developed country dummy was positive and statistically significant. The regression coefficients of the multinational dummy were statistically significant and positive in 1996, 1998, 1999, and 2000. Companies in developed countries, multinational companies, and other large companies have a large industry beta. These companies appear to suffer from an increase in industry risk, as clarified in the previous section.

7. The FTSE multinational index is an index constructed of individual stocks with high sales (30% or more) outside of their home region.

Table 4 Results of Regression Analysis of Country Beta

	America	Europe	Asia-Pacific	Middle East and Africa	Developed Countries	Multinational	Log (Cap)	R-square	Obs
1994	1.341	1.369	1.338	1.171	-0.306	0.060	-0.032	0.047	2297
	(9.32) †	(8.67) †	(10.64) †	(3.89) †	(-8.31) †	(1.45)	(-2.47) †		
1995	1.320	1.287	1.304	1.071	-0.270	0.114	-0.031	0.050	2409
	(9.65) †	(8.13) †	(11.47) †	(1.99) †	(-8.73) †	(2.60) †	(-2.51) †		
1996	1.201	1.300	1.315	1.123	-0.247	0.126	-0.024	0.044	2548
	(6.60) †	(8.76) †	(11.47) †	(3.31) †	(-8.19) †	(2.46) †	(-1.97) †		
1997	1.213	1.119	1.333	1.087	-0.166	0.072	-0.039	0.037	2602
	(6.19) †	(3.55) †	(11.19) †	(1.96)	(-5.21) †	(1.22)	(-2.68) †		
1998	1.289	1.277	1.387	1.010	-0.255	0.031	-0.088	0.063	2568
	(7.77) †	(7.18) †	(9.91) †	(0.20)	(-6.64) †	(0.56)	(-5.10) †		
1999	1.367	1.202	1.192	0.995	-0.175	0.141	-0.036	0.019	2412
	(8.74) †	(5.09) †	(5.58) †	(-0.10)	(-4.83) †	(1.93)	(-1.90)		
2000	1.123	1.052	1.015	0.980	-0.038	0.024	-0.047	0.004	1904
	(2.56) †	(1.18)	(0.45)	(-0.39)	(-1.02)	(0.34)	(-2.19) †		

Notes: Figures under America, Europe, Asia-Pacific, Middle East and Africa, Developed Countries, and Multinationals; Regression coefficients to respective dummy variable. Log (Cap) = Regression coefficients for capitalization log; Figures in parentheses are t-values based on fixed standard error to the heterogeneity of variance by White (1980). Note that the respective regional dummy is under the null hypothesis: $\beta = 1$. † = significance level of 5% (two-side test).

Table 5 Results of Regression Analysis of Industry Beta

	America	Europe	Asia-Pacific	Middle East and Africa	Developed Countries	Multinational	Log (Cap)	R-square	Obs
1994	1.001	0.606	0.638	0.947	0.350	0.025	-0.032	0.024	2297
	(0.01) †	(-2.59) †	(-3.26) †	(-0.34)	(2.78) †	(0.28)	(-0.98)		
1995	0.958	0.467	0.848	0.771	0.430	-0.014	0.009	0.036	2409
	(-0.44)	(-4.79) †	(-1.89)	(-2.30) †	(4.41) †	(-0.17)	(0.32)		
1996	1.264	0.674	0.472	0.812	0.312	0.209	-0.011	0.081	2548
	(3.00) †	(-3.25) †	(-6.24) †	(-1.39)	(3.52) †	(2.27) †	(-0.37)		
1997	0.676	0.328	0.817	0.859	0.528	0.015	0.068	0.047	2602
	(-4.09) †	(-6.85) †	(-2.19) †	(-1.49)	(5.99) †	(0.20)	(2.41) †		
1998	0.819	0.636	0.692	0.747	0.366	0.185	0.084	0.034	2568
	(-2.17) †	(-3.84) †	(-3.31) †	(-2.14) †	(4.10) †	(2.42) †	(2.22) †		
1999	1.114	0.849	0.877	0.785	0.289	0.215	0.062	0.053	2412
	(1.87)	(-2.37) †	(-2.09) †	(-2.12) †	(4.81) †	(3.32) †	(2.60) †		
2000	1.101	0.732	0.666	0.970	0.376	0.139	0.078	0.119	1904
	(1.82)	(-4.30) †	(-6.29) †	(-0.51)	(6.97) †	(2.51) †	(3.58) †		

Notes: Figures under America, Europe, Asia-Pacific, Middle East and Africa, Developed Countries, and Multinationals; Regression coefficients to respective dummy variable. Log (Cap) = Regression coefficients for capitalization log; Figures in parentheses are t-values based on fixed standard error to the heterogeneity of variance by White (1980). Note that the respective regional dummy is under the null hypothesis: $\beta = 1$. † = significance level of 5% (two-side test).

4.3 Risk Decomposition

The following analysis considers to what extent country and industry factors affect a specific instrument's risk. The respective factor ratio accounting for the dispersion of return for a specific instrument is described in Chapter 3.

(1) Region/Economic Development and Factor Ratios

Table 6 presents the averages for factor ratios (country, industry, etc.) by region (Americas, Europe, Asia Pacific, and Middle East and Africa) and economic development category (developed, advanced-emerging, emerging).

First, consider the total average of the universe population. The country factor ratio declined a little from 18.1% in 1994 to 14.3% in 2000. There is no clear trend. On the other hand, the industry factor ratio more than doubled from 5.0% to 11.2% on a standard deviation basis. The increases are most obvious in 1999 and 2000. The world market factor ratio differed significantly from year to year, from 8.7% in 2000 to 16.9% in 1998.

The year 1998 appeared to be affected by the financial crisis in Russia. When the world market factor ratio common to all individual stocks was high, the correlation among individual stocks and indexes was high. No increasing trend was observed in the world market factor ratio. Thus, there is no concrete evidence for the point of view that the correlation coefficient would tend to increase among countries, as was stated at the beginning of this paper. Another peculiar point is the significant increase trend in total return volatility (standard deviation in the table) of specific individual stocks. The total average doubled from 20.1% (1994) to 42.8% (2000) on a standard deviation basis, four times as great as on a variance basis.

Table 6 Factor Ratio by Region and Economic Development Category

	World	Country	Industry	Currency	Specific	Standard deviation	World	Country	Industry	Currency	Specific	Standard deviation
	1994						1995					
America	13.8%	11.5%	8.6%	7.3%	60.8%	17.1%	5.9%	12.2%	10.1%	10.3%	64.1%	20.5%
Europe	15.8%	17.7%	3.4%	14.9%	52.9%	25.6%	6.2%	18.3%	3.7%	14.6%	59.2%	17.0%
Asia-Pacific	12.8%	22.5%	3.0%	7.6%	56.0%	17.4%	15.3%	23.7%	3.4%	13.6%	49.8%	23.4%
Middle East and Africa	2.4%	31.1%	7.4%	8.7%	53.1%	25.1%	6.6%	32.2%	5.6%	7.2%	49.8%	18.9%
Developed Countries	15.4%	14.7%	5.4%	10.1%	57.3%	14.2%	10.9%	14.1%	6.3%	13.1%	59.4%	14.8%
Advanced-emerging Countries	3.2%	35.2%	4.7%	8.8%	50.2%	26.7%	6.5%	35.5%	3.3%	11.5%	45.7%	31.5%
Emerging Countries	6.8%	31.9%	1.8%	8.0%	53.5%	61.9%	4.6%	37.7%	1.9%	11.8%	47.6%	46.2%
Total Average	13.6%	18.1%	5.0%	9.8%	56.4%	20.1%	9.6%	19.1%	5.4%	12.8%	56.7%	20.5%
	1996						1997					
America	17.4%	8.5%	10.0%	7.0%	58.4%	16.5%	18.4%	7.7%	8.0%	6.9%	58.7%	21.8%
Europe	5.7%	15.7%	3.8%	10.5%	64.6%	14.9%	9.5%	13.8%	3.6%	10.2%	62.0%	21.8%
Asia-Pacific	8.3%	25.8%	2.5%	7.5%	56.9%	17.4%	8.6%	26.3%	3.8%	9.5%	55.9%	52.1%
Middle East and Africa	2.9%	25.1%	6.6%	11.2%	54.9%	22.5%	6.4%	24.8%	4.7%	10.7%	50.4%	27.9%
Developed Countries	12.0%	14.1%	6.1%	7.5%	60.7%	12.8%	13.7%	12.7%	5.9%	8.0%	60.9%	24.2%
Advanced-emerging Countries	2.8%	28.1%	4.0%	13.9%	53.1%	21.9%	7.0%	28.7%	3.4%	11.2%	47.1%	41.0%
Emerging Countries	4.5%	31.0%	1.9%	10.0%	55.7%	36.0%	5.6%	31.9%	2.0%	12.5%	50.7%	74.2%
Total Average	10.3%	17.4%	5.4%	8.3%	59.5%	16.6%	12.0%	16.7%	5.1%	8.9%	58.3%	33.0%
	1998						1999					
America	24.2%	7.8%	8.4%	7.6%	54.0%	39.1%	11.0%	8.2%	12.7%	6.1%	62.2%	36.6%
Europe	18.0%	14.7%	4.2%	8.9%	56.1%	52.9%	10.9%	13.8%	7.4%	7.2%	63.2%	36.2%
Asia-Pacific	9.9%	25.6%	3.1%	12.3%	51.7%	97.5%	6.2%	19.5%	5.0%	7.1%	63.6%	50.0%
Middle East and Africa	12.0%	20.0%	3.8%	13.3%	54.1%	40.5%	4.1%	23.3%	4.9%	10.9%	58.1%	26.4%
Developed Countries	18.6%	12.8%	6.1%	8.4%	55.5%	39.0%	9.9%	10.1%	9.5%	5.9%	65.6%	32.2%
Advanced-emerging Countries	14.6%	24.3%	2.6%	12.9%	48.8%	75.2%	8.6%	24.6%	3.7%	11.3%	52.8%	58.3%
Emerging Countries	10.4%	30.1%	1.8%	15.0%	48.0%	169.5%	4.4%	32.0%	2.7%	10.6%	53.1%	78.9%
Total Average	16.9%	16.6%	5.1%	9.9%	53.8%	64.1%	9.0%	14.4%	8.1%	6.9%	62.9%	41.0%
	2000											
America	11.5%	8.3%	16.2%	7.1%	57.8%	48.2%						
Europe	7.9%	16.9%	11.1%	7.9%	61.0%	38.9%						
Asia-Pacific	6.9%	16.9%	7.0%	8.0%	65.2%	42.4%						
Middle East and Africa	8.0%	21.6%	6.6%	12.3%	57.9%	33.8%						
Developed Countries	9.3%	10.4%	12.9%	6.8%	63.5%	41.5%						
Advanced-emerging Countries	9.2%	23.6%	4.4%	13.2%	51.5%	47.9%						
Emerging Countries	4.8%	32.9%	4.5%	11.0%	52.9%	48.4%						
Total Average	8.7%	14.3%	11.2%	7.9%	61.2%	42.8%						

Note: Standard deviation is the annual percentage ratio converted value.

Second, consider the counting per region. The regions (America, Europe, Asia-Pacific, and Middle East and Africa) where the industry factor ratio was large but the country factor ratio small were ranked. This trend lasted long in most regions, although the rankings of Asia Pacific and Middle East and Africa changed once.

The counting result by economic development category is more remarkable. In 2000, country factor ratios were high in advanced-emerging countries and emerging countries, at 23.6% and 32.9%, respectively. The influence of the industry factor was still limited. Thus, the conventional approach focusing on country allocation is more appropriate with respect to investment in advanced-emerging and emerging countries.

(2) Size of Company and Factor Ratio

The heavier the weighting of a large capital stock in the benchmark index, the more it contributes to portfolio performance. Differences in the respective factor ratios are analyzed by company size. Table 7 presents factor ratio averages for instrument portfolios ranked 10th, 50th, 100th, 500th, and 1000th in terms of market capitalization.

During the period of analysis, an over-concentration was observed in the market capitalization weight of the stocks of leading large companies. The top 10 individual stocks accounted for 12.9% of total, as of 2000. The top 100 individual stocks accounted for 50% of total market capitalization and the top 500, 80%.

Now consider the results of the counting. The super large top 10 stocks in terms of market capitalization had a country factor ratio of 1.9%, which reveals that the home country of a company makes no significant difference. In contrast, the industry factor ratio was an overwhelming 18.0%. The industry factor ratio surpassed the country factor ratio in 1995.

As for the top 50 individual stocks in terms of market capitalization, the industry factor ratio was higher than the country factor ratio as of 1995. However, this subsequently changed. For the top 100 individual stocks, this occurred in 1997, for the top 500,

Table 7 Characteristics of Top Companies in Terms of Market Capitalization

Rank	Cumulative Weight	World	Country	Industry	Currency	Specific	Cumulative Weight	World	Country	Industry	Currency	Specific
	1994						1995					
10	7.4%	17.0%	15.6%	4.1%	9.8%	54.9%	7.1%	22.7%	8.9%	11.3%	14.1%	50.4%
50	21.9%	16.7%	11.6%	8.8%	10.5%	54.6%	22.5%	16.6%	9.3%	13.7%	12.2%	54.0%
100	32.5%	19.1%	14.8%	7.0%	11.1%	50.8%	33.0%	15.5%	11.4%	11.2%	13.3%	54.0%
500	68.9%	18.3%	15.9%	6.4%	10.3%	52.1%	69.2%	12.6%	15.4%	8.0%	13.8%	54.6%
1000	86.3%	16.7%	16.2%	6.2%	9.7%	54.3%	86.2%	11.8%	15.6%	7.4%	13.3%	56.1%
	1996						1997					
10	7.8%	23.6%	7.6%	10.3%	7.9%	51.8%	8.9%	30.2%	4.8%	11.4%	8.3%	44.7%
50	22.5%	20.3%	10.3%	10.8%	6.8%	52.9%	24.3%	29.7%	5.6%	7.8%	7.1%	50.0%
100	32.9%	20.9%	10.4%	10.1%	7.3%	51.7%	35.1%	26.2%	8.5%	7.7%	7.1%	50.3%
500	67.8%	17.0%	14.0%	6.9%	7.8%	54.8%	70.1%	21.1%	10.8%	6.4%	8.0%	53.8%
1000	84.8%	15.4%	14.3%	7.0%	7.9%	56.1%	86.2%	17.5%	11.5%	6.5%	8.0%	56.4%
	1998						1999					
10	9.8%	21.7%	4.9%	9.2%	8.8%	50.5%	11.7%	25.7%	2.2%	11.6%	5.2%	54.4%
50	28.0%	23.3%	5.0%	8.7%	8.1%	53.1%	32.5%	22.7%	4.2%	13.1%	5.3%	54.0%
100	40.2%	26.1%	6.6%	8.2%	7.5%	50.1%	45.4%	23.1%	5.8%	12.3%	4.7%	53.7%
500	75.1%	23.5%	8.7%	7.1%	7.9%	52.7%	78.6%	16.6%	7.9%	10.7%	5.1%	59.7%
1000	89.8%	22.0%	10.2%	6.8%	7.8%	53.5%	91.6%	12.8%	9.6%	10.6%	5.8%	61.4%
	2000											
10	12.9%	24.2%	1.9%	18.0%	7.5%	52.1%						
50	35.7%	19.9%	3.3%	15.4%	6.3%	57.8%						
100	49.5%	18.3%	4.6%	16.7%	6.7%	55.8%						
500	83.0%	12.5%	7.6%	15.5%	7.1%	58.9%						
1000	94.5%	10.4%	9.5%	14.5%	7.3%	60.0%						

Notes: This table shows the averages of the respective factor ratios for the 10th, 50th, 100th and 1000th ranked individual stocks in terms of average market capitalization per year. Cumulative weight: total sum of the weighted capital market using the parent population of applicable individual stocks.

in 1999, and for the top 1,000 in 2000. For the top 100 individual stocks, accounting for around 50% of cumulative market capitalization, the industry factor ratio was 3.6 times, and for the top 500 (over 80%), more than two times (the country factor ratio).

Supposing a traditional management strategy is employed where country allocation is first effected, then portfolios constructed. If the portfolios in the respective countries are made up of large caps, it will be impossible to obtain the intended return. A simple control using the weight of a country is no longer useful for making a bet on the country factor. Thus, these facts strongly point to the necessity of factoring in the difference in the country beta per instrument.

(3) Counting Results by Country

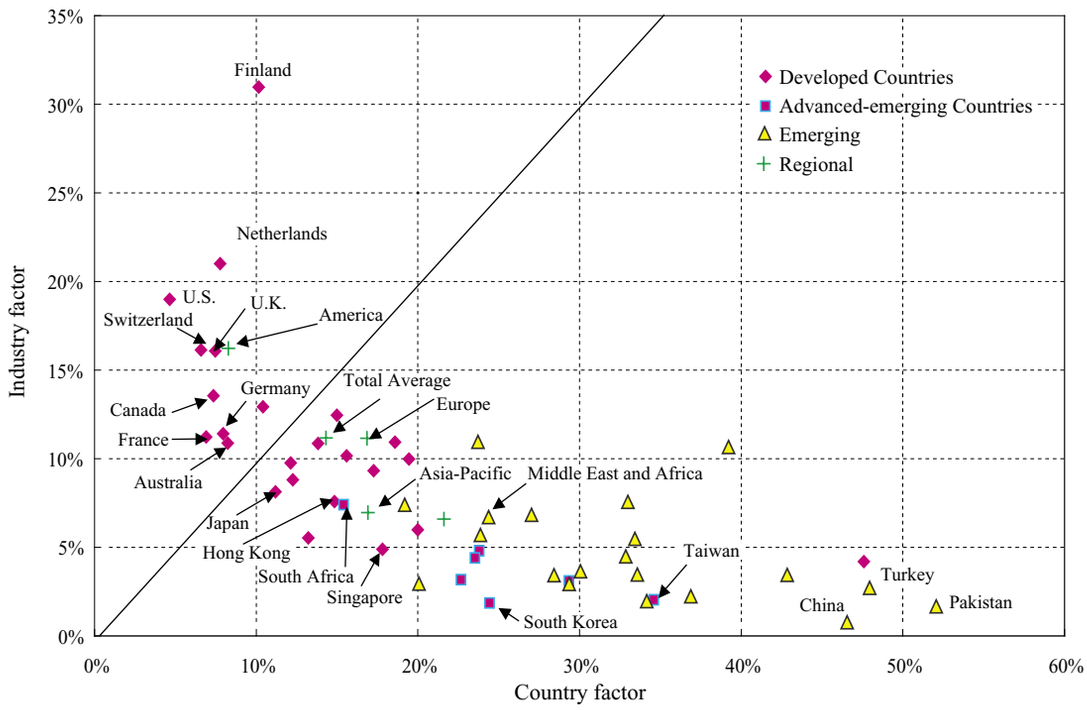
This section considers the results by country of the respective factor ratios. Trends are summarized in the relative proportions of the various factors by country, region, or chronological change. Then, discussion centers on which factor affects the judgment of company value by a fund manager or analyst.

In Figure 1 (2000) and Figure 2 (1994), the average of each country is plotted, with the country factor percentage on the horizontal axis and the industry factor percentage on the vertical axis.

In these figures, developed areas, especially Europe and the U.S., are positioned in the upper left. The industry factor ratio surpasses the country factor ratio in the following nine countries: the U.S., U.K., Germany, France, Netherlands, Switzerland, Canada, Australia, and Finland. In these countries (on average), it is more important to predict the global industrial trend than the influence from a peculiar factor, such as national economic conditions, when predicting the return of a specific instrument. Japan is positioned under the plotted diagonal line. Japanese country and industry factor ratios are almost at the same level. In general, the developed countries are in the upper left (the industry factor ratio > the country factor ratio) followed by advanced-emerging countries and emerging countries.

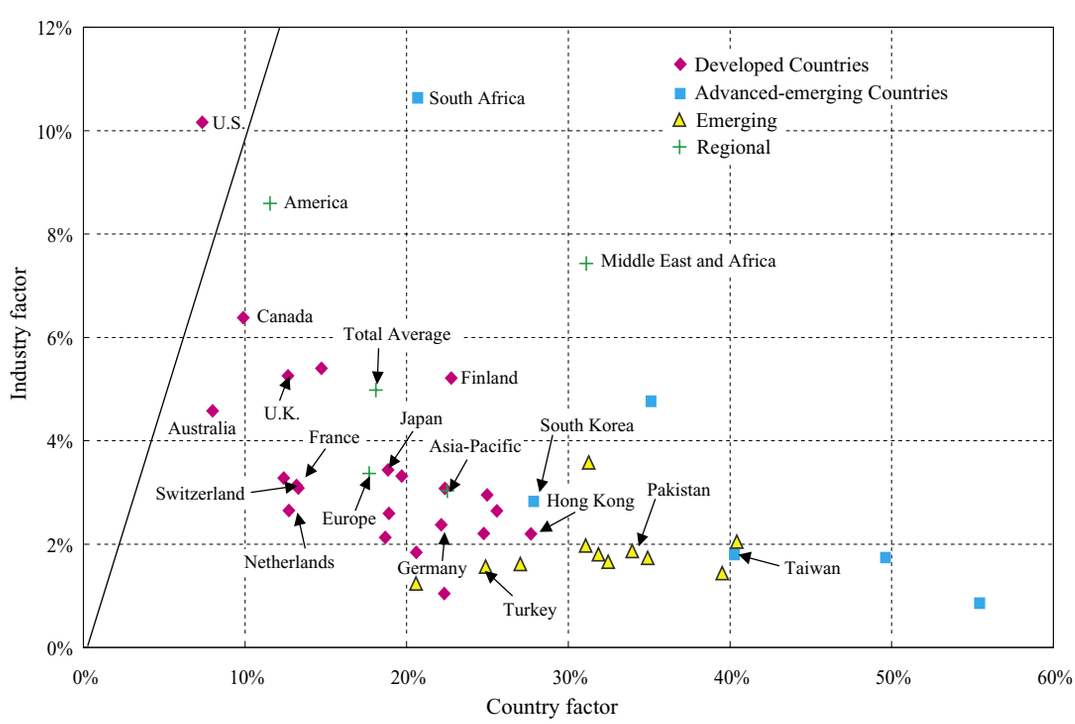
When comparing with Figure 1, in Figure 2, only the U.S. is a little above the plotted diagonal line as of 1994. The industry factor ratio is below the country factor in the other countries. This indicates that countries rich in natural resources such as Canada, Australia, and South Africa are highly globalized. (The counting result by sector including resources will be discussed later.)

Figure 1 Country Factor vs. Industry Factor (by country, 2000)



Source: Nomura Securities Finance Research, Co., Ltd.

Figure 2 Country Factor vs. Industry Factor (by country, 1994)



Source: Nomura Securities Finance Research, Co., Ltd.

Table 8 shows the average for the respective factor ratios according to country, world market, industry, foreign exchange market, and specific instrument (data of 2000 was used). C/I indicates the proportion of the country factor ratio to the industry factor ratio. Among the developed countries, Greece has a high C/I but its globalization is low.

Table 8 Average Factor Proportion by Country (2000)

Country	No.	World	Country	Industry	Currency	Specific	C/I	Market Capitalization($ mil)	Standard Deviation(%)
Australia	59	4.0%	8.2%	10.9%	9.3%	83.1%	0.76	5268	21.9
Austria	17	4.0%	12.1%	9.8%	8.5%	74.2%	1.24	1108	19.9
Belgium / Luxemburg	14	6.0%	18.6%	10.9%	4.6%	62.1%	1.70	6099	14.9
Canada	81	8.4%	7.3%	13.5%	11.3%	65.9%	0.54	6535	41.3
Switzerland	24	10.8%	7.5%	16.1%	9.0%	64.3%	0.46	23405	21.1
Germany	38	8.3%	7.9%	11.4%	7.4%	68.7%	0.70	22695	28.9
Denmark	21	4.1%	12.3%	8.8%	5.6%	75.1%	1.39	3013	41.9
Spain	20	9.0%	15.6%	10.2%	5.5%	67.6%	1.53	13279	23.6
Finland	7	13.5%	10.2%	31.0%	7.7%	49.4%	0.33	38910	62.5
France	50	9.3%	6.9%	11.2%	6.1%	68.9%	0.62	19201	35.9
U.K.	121	9.9%	6.6%	16.1%	7.0%	63.0%	0.41	14760	39.2
Greece	55	4.7%	47.6%	4.2%	6.7%	37.8%	11.36	1481	56.2
Hong Kong	44	10.7%	14.8%	7.6%	6.7%	59.6%	1.96	7763	43.9
Ireland	12	5.5%	13.8%	10.9%	2.9%	69.7%	1.27	3560	26.7
Italy	39	8.0%	17.3%	9.3%	6.9%	66.4%	1.85	12667	31.3
Japan	330	7.7%	11.2%	8.1%	6.4%	70.3%	1.38	9519	39.5
Netherlands	17	8.7%	7.8%	21.0%	8.7%	56.9%	0.37	28048	42.6
Norway	23	5.1%	19.4%	10.0%	7.5%	66.2%	1.95	1339	40.2
New Zealand	14	4.5%	13.2%	5.5%	6.5%	72.3%	2.39	935	32.0
Portugal	10	4.5%	20.0%	6.0%	7.6%	66.7%	3.34	4548	19.2
Singapore	36	12.0%	17.8%	4.9%	5.8%	61.1%	3.65	3084	44.3
Sweden	30	13.1%	15.0%	12.4%	9.7%	60.5%	1.20	9626	32.8
U.S.	449	12.4%	4.6%	19.0%	5.9%	57.0%	0.24	24544	51.3
Average of Developed Countries	1511	9.3%	10.4%	12.9%	6.8%	63.5%	0.81	14430	41.5
Brazil	24	11.8%	22.7%	3.1%	12.4%	48.5%	7.26	2876	48.4
Israel	19	3.8%	29.4%	3.1%	22.7%	43.9%	9.60	1841	22.8
South Korea	15	7.7%	24.5%	1.8%	12.7%	51.2%	13.50	5876	90.8
Mexico	18	15.5%	23.8%	4.8%	7.6%	52.9%	5.01	4990	43.5
Taiwan	27	2.1%	34.7%	2.0%	18.5%	41.1%	17.39	7318	56.0
South Africa	50	12.1%	15.5%	7.4%	9.2%	61.0%	2.10	1901	41.4
Average of Advanced-emerging Countries	153	9.2%	23.6%	4.4%	13.2%	51.5%	5.41	3756	47.9
Argentina	10	11.0%	42.8%	3.4%	6.7%	41.1%	12.42	938	44.6
Chile	16	11.4%	28.4%	3.4%	7.5%	58.2%	8.29	1798	25.5
China	4	0.8%	46.5%	0.8%	4.2%	51.7%	61.03	156	34.0
Columbia	10	1.3%	33.0%	7.6%	9.5%	61.0%	4.37	321	26.4
Czech Republic	6	1.9%	36.9%	2.2%	17.8%	46.5%	16.45	1712	29.5
Egypt	13	1.4%	24.4%	6.7%	7.4%	70.2%	3.64	313	33.6
Hungary	8	6.1%	19.2%	7.4%	10.5%	58.8%	2.59	1514	34.5
Indonesia	17	1.0%	33.4%	5.5%	9.7%	51.2%	6.10	857	40.1
India	22	5.4%	27.0%	6.8%	6.1%	58.9%	3.96	1990	64.0
Morocco	7	2.6%	39.2%	10.7%	15.4%	51.7%	3.68	791	9.7
Malaysia	17	2.0%	34.2%	2.0%	8.2%	57.1%	17.41	2772	40.1
Pakistan	8	2.1%	52.1%	1.7%	9.0%	41.5%	31.37	450	51.7
Peru	6	2.9%	23.7%	11.0%	9.0%	70.3%	2.16	226	20.2
Philippines	17	7.9%	30.1%	3.6%	13.9%	50.1%	8.26	902	38.4
Poland	21	4.3%	29.4%	2.9%	13.2%	55.4%	10.02	822	43.1
Thailand	30	5.4%	33.6%	3.5%	13.0%	45.7%	9.69	833	65.5
Turkey	18	1.5%	47.9%	2.7%	21.2%	35.1%	17.72	2200	105.8
Venezuela	5	2.2%	23.9%	5.7%	11.0%	68.6%	4.19	767	49.7
Russia	5	23.6%	20.1%	2.9%	7.3%	53.3%	6.82	3691	86.2
Average of Emerging Countries	240	4.8%	32.9%	4.5%	11.0%	52.9%	7.32	1266	48.4
Americas	619	11.5%	8.3%	16.2%	7.1%	57.8%	0.51	18990	48.2
Europe	556	7.9%	16.9%	11.1%	7.9%	61.0%	1.51	11571	38.9
Asia-Pacific	640	6.9%	16.9%	7.0%	8.0%	65.2%	2.43	6802	42.4
Middle East and Africa	89	8.0%	21.6%	6.6%	12.3%	57.9%	3.27	1569	33.8
Total Average	1904	8.7%	14.3%	11.2%	7.9%	61.2%	1.28	11913	42.8

Notes: No: Number of individual stocks for which factor proportion could be estimated. World to Specific: Simple average of each factor per sector. No.: Number of individual stocks for which factor proportion could be estimated. C/I: Country factor proportion/industry factor proportion - If less than 1, the influence of the industry factor is larger. Market capitalization: Average stock market capitalization. Standard deviation: Average standard deviation. As the correlation of the factors is not always zero, the total sum of the factor proportion is not 100%.

One of the characteristics of world market factor ratios is that they are low in the developed countries. Averages as of 2000 are 9.3% in the developed countries and 9.2% in the advanced-emerging countries, but only 4.8% in the developed countries. Those of China, Columbia, and Egypt are almost zero. Therefore, additional risks are low or nil if individual stocks of these countries in sufficiently dispersed global regions are added[8]. This indicates that a large portion of the risk in emerging and advanced-emerging countries is composed of the country factor and the foreign exchange factor.

As for the country factor, a risk premium might be obtained if the market was segmented. In this case, global investors would obtain a return in spite of diversifiable risks.

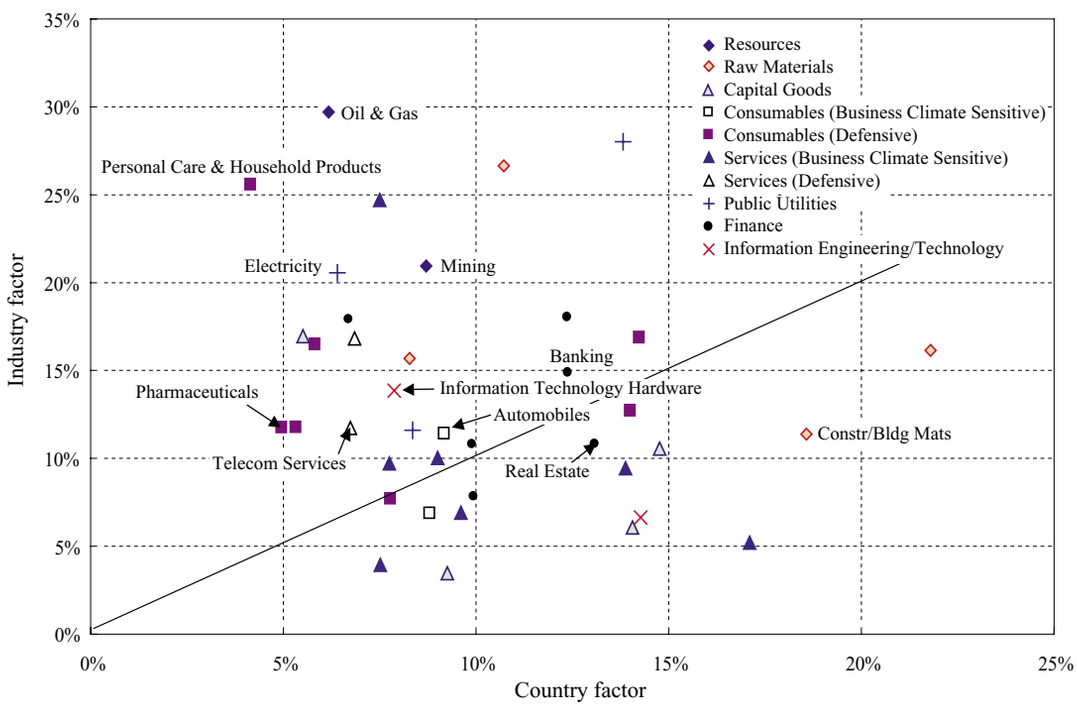
(4) Result of Counting by Sector

This section provides the results of counting by sector.

Figures 3 and 4 show plotted averages of country and industry factor ratios, respectively. Note that only the results of counting for the developed countries are provided because the industry factor ratio is very low (or the industry beta is low) in developed and the advanced-emerging countries. Table 9 provides the results of counting by sector as of 2000.

A increasing trend in the industry factor ratio is observed as well. However, some sectors, such as mining and electric utilities, did not exhibit much change from the time point of 1994. Trading in commodity markets is common to these two sectors.

Figure 3 Country Factor vs. Industry Factor (by sector, 2000)



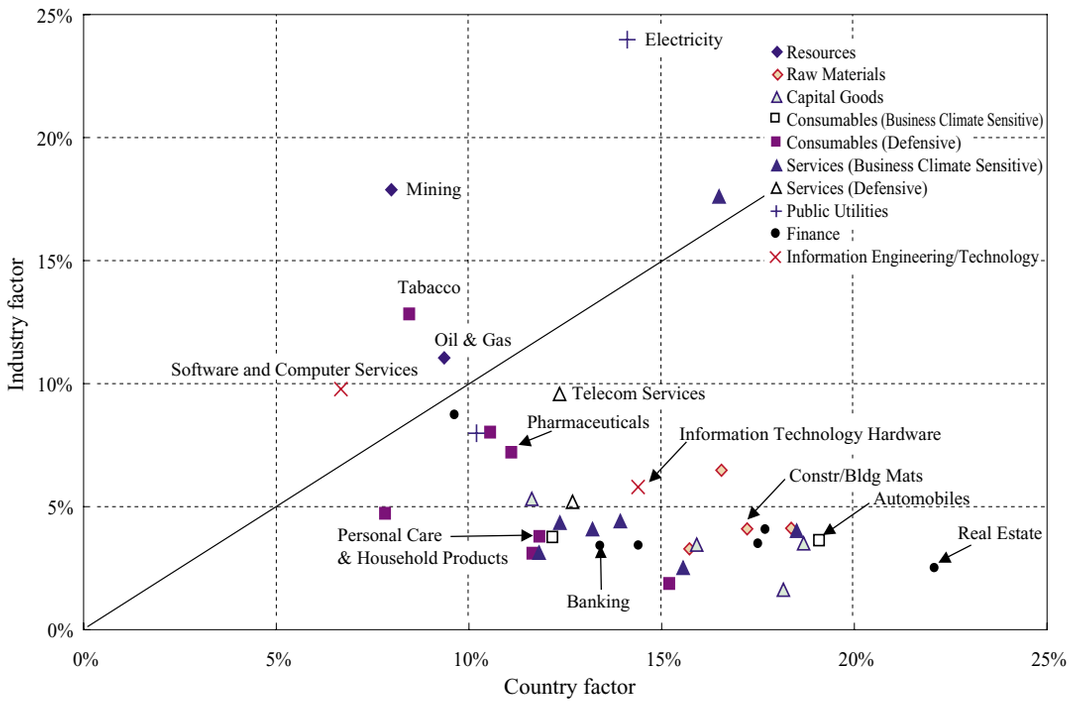
Source: Nomura Securities Finance Research, Co., Ltd.

Sectors that had a sufficient number of samples and a low C/I ratio (affected by the industry factor) were oil and gas, electricity, aerospace and defense, paper and pulp, mining, life insurance, food/medical retail, beverages (more than 20 individual stocks, and C/I below 0.5). The C/I for IT hardware and communication services was high at 0.57. Taking the oil/gas sector as an example, EXXON MOBIL, a typical stock, had a country factor ratio of 0.2% and an industry factor ratio of 39.2%. BP AMOCO had a country factor ratio of 2.6% and an industry factor ratio of 51.6%.

In contrast to the above, sectors with high C/I ratios include construction and materials, and real estate, both of which rely on earnings centering on the home country. Other high C/I ratio sectors include industries for which the industry factor can only be roughly calculated; this would include industries dominated by conglomerates.

8. As there was small systemic risk in real terms, the return might be zero. This issue is beyond the scope of this analysis.

Figure 4 Country Factor vs. Industry Factor (by sector, 1994)



Source: Nomura Securities Finance Research, Co., Ltd.

5. Consideration of Open Issues in Global Investment

This chapter discusses the foreign exchange risk hedging issue, which is a cliche in the global investment theme, and the home asset bias puzzle under the results of analysis.

5.1 Currency Risk Hedging

The currency risk hedging issue in global investment is one of those issues for which there is no clear consensus. Summarizing the main viewpoints, some consider that currency risk should be hedged because, unlike risk premium, it is not the kind of risk that is associated with bringing a return on investment, whilst others consider that hedging is unnecessary because foreign exchange rate converges at a proper level over the long term (as determined by purchasing power parity) and does not pose a long-term investment risk. In addition, some think that partial (in-between) hedging is appropriate and employ an approach to calculate the optimum-hedging ratio. However, there are many problems with this because it is very sensitive to sampling periods.

Although optimal hedging ratios digresses from the main theme, the rights and wrongs of being exposed to the foreign currency risks associated with investing in foreign stocks do require consideration. For example, suppose someone invested 1 million dollars in a U.S. stock. In this case, the hedging ratio is often determined on the assumption of the exposure of 1 million dollars to U.S. dollars when 1 million dollars is invested on U.S. stocks. If the U.S. stock has a negative correlation with the yen/dollar exchange rate, U.S. dollar exposure will not exceed 1 million dollars without foreign currency hedging. Global companies that operate businesses in one or more countries earn profit in multiple currencies. If one of these companies earns profit in Japanese yen, part of the expected cash flow determining the value of this company will be linked to the yen rate to some extent. Japanese investors think of this as yen exposure without hedging currency risk. Actually, a company's currency sensitivity (exposure) is considered actually in conjunction with several factors, including the currency composition of its cash flow, the size of currency hedging, etc. When focusing on a certain currency, for example the yen, the degree of yen sensitivity for a company is determined by the characteristics of the Japanese market, i.e. the consideration that Japan is an exporting country. Sensitivity also reflects the sector to which the company belongs.

Table 10 shows the annual average of the currency beta (the beta to the key currency/local currency in Equation (1)).

Above are the average betas of all individual stocks excluding individual stocks denominated by respective key currencies. As

Table 9 Total per Sector (as of 2000)

	No.	World	Country	Industry	Currency	Specific	C/I (Developed)	C/I (Total)	Market Capitalization($ mil)	Standard Deviation (%)
Mine	21	4.0%	8.7%	20.9%	7.9%	61.8%	0.42	0.66	5037	30.3
Oil and Gas	56	3.7%	6.2%	29.7%	10.2%	63.4%	0.21	0.39	21655	38.4
Chemical	63	7.0%	8.3%	15.7%	7.4%	62.7%	0.53	1.00	5887	35.0
Construction and Its Materials	57	6.7%	18.6%	11.4%	6.4%	63.3%	1.63	2.37	3017	44.5
Paper and Pulp	24	9.1%	10.7%	26.7%	7.7%	52.5%	0.40	0.55	3858	34.1
Steel and Other Metals	28	8.1%	21.8%	16.1%	7.5%	55.6%	1.35	1.99	3111	41.6
Aerospace and Defense	16	4.3%	5.5%	16.9%	6.2%	65.1%	0.33	0.48	12070	41.2
Conglomerate	29	11.8%	14.1%	6.1%	6.8%	63.1%	2.32	3.63	11859	32.1
Electronics	54	15.5%	9.3%	3.5%	7.1%	66.4%	2.67	4.09	10437	53.9
Engineering	58	8.9%	14.8%	10.6%	6.4%	64.1%	1.40	1.68	3627	36.6
Automotive and Auto-Parts	39	8.3%	9.2%	11.4%	7.0%	66.3%	0.81	1.28	14873	37.2
Furniture and Clothing	43	9.1%	8.8%	6.8%	5.8%	69.4%	1.29	1.74	5989	41.0
Beverage	20	3.4%	5.3%	11.8%	7.6%	72.3%	0.45	1.34	16640	25.1
Food	56	2.7%	14.0%	12.7%	6.9%	67.1%	1.10	1.45	6330	24.5
Healthcare	30	6.1%	7.8%	7.7%	6.4%	72.6%	1.01	1.01	10108	62.2
Packaging	10	13.4%	14.2%	16.9%	6.1%	53.4%	0.84	0.90	2434	36.0
Homeware and Personal Goods	14	2.9%	4.2%	25.6%	7.8%	63.4%	0.16	0.22	18645	33.1
Medical	41	4.4%	5.0%	11.7%	7.9%	71.8%	0.42	0.69	34258	35.0
Tobacco	10	4.0%	5.8%	16.5%	5.4%	70.3%	0.35	0.86	10252	31.2
Distribution	26	9.0%	17.1%	5.2%	6.5%	63.0%	3.28	3.73	2978	40.2
Retail	53	10.1%	9.0%	10.0%	6.1%	66.0%	0.90	1.21	13935	49.0
Hospitality	25	11.9%	7.5%	3.9%	5.7%	70.5%	1.91	3.80	13734	37.4
Media and Photo	62	13.9%	7.7%	9.7%	7.6%	61.8%	0.80	1.05	10220	49.5
Catering	9	1.6%	7.5%	24.7%	3.9%	58.3%	0.30	0.30	10036	30.9
Support Services	20	5.5%	9.6%	6.9%	6.2%	75.0%	1.39	1.39	5427	37.3
Transportation	73	6.4%	13.9%	9.4%	6.1%	69.2%	1.47	1.61	4011	32.3
Food and Medical Retail	21	2.4%	6.9%	16.8%	8.8%	66.4%	0.41	0.49	11500	28.9
Communication Services	51	15.3%	6.7%	11.7%	6.9%	58.9%	0.57	1.69	52317	63.9
Electricity	64	2.6%	6.4%	20.6%	5.5%	63.7%	0.31	0.80	8015	21.8
Gas	18	5.2%	8.4%	11.6%	8.8%	74.0%	0.72	1.14	8882	23.6
Water	3	2.5%	13.8%	28.0%	11.2%	50.4%	0.49	0.49	3756	27.6
Bank	122	10.2%	12.4%	14.9%	6.5%	57.9%	0.83	1.70	17790	25.2
Insurance excl. Life Insurance	50	5.2%	12.4%	18.0%	6.2%	62.7%	0.69	0.82	16868	27.2
Life Insurance	18	6.1%	6.7%	17.9%	4.9%	64.4%	0.37	0.93	12682	40.0
Investment	19	27.9%	9.9%	10.8%	5.6%	51.1%	0.92	1.25	3214	18.4
Real Estate	41	7.0%	13.1%	10.8%	8.0%	61.8%	1.21	1.88	3843	26.6
Other Financial Institutions	55	15.6%	9.9%	7.8%	6.0%	60.0%	1.27	2.25	13387	42.5
IT Hardware	74	22.8%	7.9%	13.9%	6.7%	58.2%	0.57	1.05	48110	98.6
Software and Computer Service	38	17.0%	14.3%	6.6%	6.4%	60.6%	2.15	2.40	31359	104.1

Notes: The table contains the results of aggregation of the developed countries as a parent population except the C/I (Total). No.: Number of individual stocks for which factor proportion could be estimated. World to Specific: Simple average of each factor by sector. C/I (Developed): Average for the developed countries of Country factor proportion/Industry factor proportion. C/I (Total): Total average of the same. If less than 1, the industry factor influence is larger than the other. Market capitalization: Average stock market capitalization. Standard deviation: Average standard deviation.

for the yen, values were negative in all years except 1995 when the yen greatly appreciated. In recent years, such as 1999 and 2000, the average has been around -0.2%. In the case of valuation under a yen-denominated condition (add 1), the currency risk to the yen is around 0.8. In other words, on average, 80% of the invested amount in the foreign stocks should be hedged. However, the sign of the coefficient to the other currencies is not always constant. A more deliberate stance may be necessary assuming that the yen beta is always negative.

5.2 Home Asset Bias

Lastly, there follows analysis of the relation between foreigners' shareholding ratio and the respective factor ratios of Japanese stocks that are included among the analyzed individual stocks in this paper. In addition, a simple overview is provided of the home asset bias puzzle and its implications are discussed from the viewpoint of the Japanese investor.

Table 11 shows the result of a single regression of foreigners' shareholding ratio by respective factor ratios. The parent population for it was extracted from the parent population of this analysis for which foreigners' shareholding ratio data was

Table 10 Average of Foreign Exchange Betas

	Yen	Dollar	Euro	Pound
1994	-0.209	0.275	-0.120	-0.182
	(-13.83)	(4.07)	(-4.86)	(-5.79)
1995	0.009	0.161	-0.004	-0.301
	(0.74)	(2.43)	(-0.20)	(-14.40)
1996	-0.125	-0.176	-0.094	-0.308
	(-6.10)	(-2.11)	(-5.36)	(-12.47)
1997	-0.062	-0.018	-0.140	-0.404
	(-5.98)	(-0.53)	(-9.23)	(-11.92)
1998	-0.047	0.258	-0.528	0.006
	(-3.07)	(5.86)	(-14.94)	(0.13)
1999	-0.192	-0.175	-0.064	-0.159
	(-15.79)	(-3.33)	(-2.31)	(-4.70)
2000	-0.221	0.131	-0.105	-0.074
	(-10.91)	(2.96)	(-4.85)	(-1.75)

Notes: Values in parentheses are t-values. Average currency data of all individual stocks except those denominated by respective key currencies (excluding dollar-linked countries).

Table 11 Foreigners' Shareholding Ratio

	World market			Country			Industry			Foreign exchange			Specific			obs
	Constant Term	Coefficient	R2	Constant Term	Coefficient	R2	Constant Term	Coefficient	R2	Constant Term	Coefficient	R2	Constant Term	Coefficient	R2	
1994	0.104	-0.125	0.025	0.094	-0.042	0.003	0.085	0.021	0.000	0.079	0.090	0.004	0.054	0.055	0.010	414
	(14.07) †	(-3.55) †		(10.95) †	(-1.06)		(16.43) †	(0.25)		(11.69) †	(1.07)		(3.23) †	(1.90)		
1995	0.099	-0.029	0.002	0.098	-0.039	0.001	0.086	0.137	0.009	0.087	0.032	0.001	0.087	0.011	0.000	439
	(10.64) †	(-0.81)		(12.02) †	(-0.83)		(18.27) †	(1.98) †		(8.03) †	(0.58)		(6.24) †	(0.38)		
1996	0.110	0.054	0.002	0.145	-0.120	0.030	0.107	0.285	0.018	0.107	0.147	0.004	0.089	0.045	0.005	440
	(16.29) †	(1.02)		(14.05) †	(-3.79) †		(20.41) †	(1.78)		(15.02) †	(1.28)		(5.12) †	(1.42)		
1997	0.113	0.067	0.003	0.159	-0.197	0.090	0.113	0.112	0.005	0.098	0.317	0.037	0.065	0.091	0.024	433
	(17.44) †	(1.18)		(18.76) †	(-6.84) †		(18.63) †	(1.60)		(14.53) †	(3.36) †		(3.84) †	(2.98) †		
1998	0.116	0.097	0.004	0.169	-0.191	0.066	0.117	0.182	0.007	0.132	-0.085	0.004	0.045	0.143	0.055	417
	(15.19) †	(1.35)		(17.15) †	(-5.32) †		(18.97) †	(1.74)		(15.18) †	(-1.23)		(3.09) †	(5.25) †		
1999	0.104	0.306	0.043	0.143	-0.175	0.022	0.126	-0.043	0.001	0.112	0.203	0.006	0.149	-0.037	0.002	421
	(15.07) †	(3.41) †		(16.46) †	(-3.24) †		(16.22) †	(-0.57)		(14.41) †	(1.46)		(4.72) †	(-0.84)		
2000	0.136	0.295	0.040	0.186	-0.243	0.031	0.165	-0.077	0.003	0.137	0.341	0.023	0.258	-0.142	0.019	322
	(15.19) †	(3.47) †		(17.24) †	(-3.68) †		(19.17) †	(-1.07)		(14.01) †	(2.30) †		(6.65) †	(-2.67) †		

Notes: This table contains the results of the single regression of foreigners' shareholding ratio by each factor ratio. t-values in parentheses based on fixed standard error to variance non-conformity.

available. Foreigners' shareholding ratio data was obtained from the database of Toyo Keizai Inc. As for the regression in 2000, data was on a settlement basis during 2000 (from January to December). It is necessary to note that the settlement term was different by stock.

The result of regression as per the country factor ratio indicates the most remarkable characteristic. Regression coefficients are all negative, and are at a statistically significant level after 1996. The portfolio for foreign investors underweighted individual stocks strongly affected by the Japanese particular factor.

This result can be interpreted in several ways. First, foreign investors just happened to feel more bearish about Japan than Japanese investors during the period. Second, the information held by global investors and domestic investors was asymmetrical. Where global investors' predictions on factors peculiar to Japan may be relatively inferior to other factors, the long-term average weight of individual stocks with a high Japanese factor ratio may be lowered in a portfolio for foreign invest[9]). Third, it is the hedged portfolio in connection with the non-trading assets of the Japanese invest[10].

There is such a trend as home asset bias, as foreign assets are actually underweighted and domestic assets overweighted[11].

9. Suppose there are two stocks without correlation between return and the risk- free asset. If an investor selects a portfolio on an efficient frontier, the weights of the respective assets will be proportioned to the respective return/variance ratio. If an investor has a prediction about the return on the other instrument, the conditioned diversification of the instrument will be lowered without such prediction. When it is averaged over the long term, the return will conform to the unconditional expected value. Therefore, the weight of individual stocks with the prediction will be overweighted by the decrease in the denominator. See Treynor and Black (1973)

10. Adler and Dumas (1983) indicated that the optimal portfolio for an investor is the combination of the logarithmic utility maximized portfolio common to all investors under the conditions in an assumed model and the hedged portfolio under the condition variable peculiar to the investor. See Metron et al (1973).

This cannot be attributed to the constant lower expected return on foreign assets. From this point of view, the second and the third interpretations may be more reasonable than the first. If so, it might be considered reasonable investment behavior to some extent that Japanese would hold many individual stocks with a high correlation with the Japanese country factor. This is because of the relative superiority in information or the holding of a hedged portfolio.

6. Conclusion

The factor ratios making up the total risk of a specific instrument were estimated covering stocks of countries around the world. These ratios included country and industry factors.

Based on this estimation, the necessity for changes to investment strategies and company valuation methods for global investment were considered. The result of this analysis indicates that the industry factor is becoming more influential than the country factor in determining variations in returns from specific individual stocks. This trend is specifically remarkable with large stocks that are particularly important for investors. For asset allocation, an asset with a high variation under a similar level of prediction will bring a high return. Therefore, global sector allocation will have a more important positioning in investment strategy. In addition, in the fundamental analysis of a company, comparison is more likely to be similar to that of foreign shareholders, rather than domestic individual stocks.

On the other hand, it is also indicated that the influence from the country factor is presently much higher in advanced-emerging or emerging countries. The influence of the industry factor is still limited. To take the conventional approach, focusing on country allocation may be more reasonable here.

The result of analysis of foreigners' shareholdings of Japanese stocks indicates that the possibility of asymmetric information on the country factor exists between domestic and foreign investors. It is one piece of empirical evidence of the theory that home asset bias is reasonable behavior by an investor based on information asymmetry.

Circumstances in global investment are currently undergoing change. In this analysis, the largest change was in the risk factors. To look for active return or pursure efficient risk management of a portfolio, continuous analysis of the risk characteristics of global stocks will be needed in the future.

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11. Karolyi and Stutz (2001) performed a survey on the home asset bias. Kang and Stulz (1997) analyzed the foreigners' shareholding ratio of Japanese stocks as well. They described home bias by the relative information inferiority of foreign investors similarly to the second interpretation.