



**ASIAN SECURITIES ANALYSTS  
FEDERATION INC.**

**ELECTRONIC JOURNAL**

Issue no. 6

## **EDITORIAL**

Welcome to our sixth issue.

This issue largely focuses on presentations that were made as part of an Education Sub-Committee seminar during the recent AGM held in Beijing. The topic of the special seminar was “How should a society be managed and operated from a view of sound financial structure?” The seminar was very informative and provided an excellent opportunity to listen and learn from some of the larger member societies who shared their experiences with us.

Australia, Hong Kong and Japan were kind enough to provide speakers from their societies who made open, informative, and frank presentations. The presentations were interactive and there were a great deal of questions for all the speakers.

The session was unanimously endorsed by the audience as having delivered excellent value.

In addition we have some other articles which have been kindly supplied by the Japanese societies.

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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### **Here are the links:**

Link to ASAF's website <http://www.asaf.org.au>

Link to Japan website <http://www.saa.or.jp>

Link to Australia website <http://www.securities.edu.au>

Link to Korea website <http://www.kciaa.or.kr>

Link to PR China website <http://www.s-a-c.org.cn>

Link to Malaysia website <http://www.klse.com.my>

Link to Chinese Taipei website <http://saa.tse.com.au>

Link to NZ website <http://www.infinz.com>

Link to Hong Kong website <http://www.hksi.org>

Link to Singapore website <http://www.sfa.org.sg>

Link to India website <http://www.icfai.org>

Link to Thailand website <http://www.saa-thai.org>

# ***Securities Institute***

## **ASAF Education Committee**

**Presentation By  
Robert Swinton SIA (Aff)  
October 2003**

**How should a society be managed and operated from a view of a sound financial structure?**

**How should ...**

**a society be managed and operated from a viewpoint of a sound financial structure?**

**Case study on the SIA  
as a model that has worked**



We believe a case study on the Securities Institute is a good example of showing a model that has worked.

To do this there are five key areas that I would like to cover.

Firstly, a history and background about the Securities Institute of Australia, then an overview about the education market in Australia. Then I would like to talk about the Securities Institute today, its position in the market place and some of the key competitors, then cover the practitioner model that underpins the Securities Institute business model, and finally talk about a few elements that we believe make a sound financial structure of a financial services organisation.

## How did the Securities Institute start?

### How the SIA started

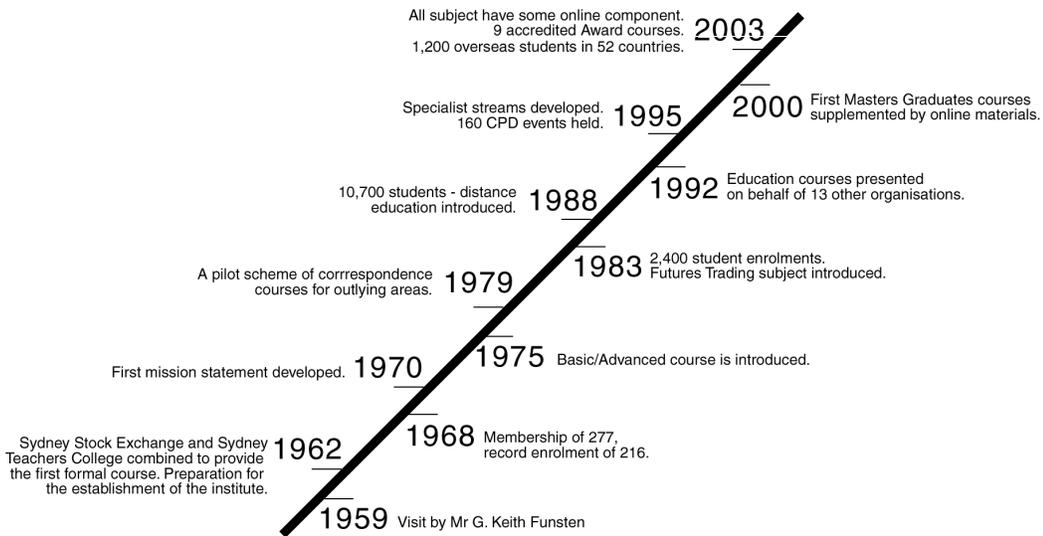


- Original idea hatched in 1959
- Institute started in 1964 as the Stock Exchange Institute
- Undeveloped education market
- Growing financial services market

The idea to develop a Securities Institute in Australia was originally hatched in 1959. The then chairman of the New York Stock exchange, a gentleman by the name of Keith Funston had visited the Australian Stock Exchange chairman, Alistair Urquhart. At that stage the notion of the securities industry was quite new, there was little formal training and a need was recognised for organisations to train people in securities, as this was not covered by the universities at the time. It was also recognised that common standards were needed because the industry was growing and as such was paving new ground.

# SIA timeline

## The Institute history



Five years later the Australian Stock Exchange Institute was formed and that was the basis for what is now known as the Securities Institute of Australia.

Just prior to this, in 1962, the Sydney Stock Exchange and the Sydney Teachers College combined to provide the first formal course in preparation for the establishment of the Institute. As I have mentioned before the Institute was established in 1964. By 1968 there were 277 members and enrolments of 216 people, in what was known as the Stock Exchange course. In 1970 the first mission statement was developed for the Institute and interestingly enough, it is very similar to the mission statement that exists today. Five years later, in 1975, the basic and advanced courses were introduced. This was significant because it was the first point at which the Institute had product or course differentiation.

In 1979 a pilot scheme of correspondence courses was developed to enable people in outlying areas to benefit from the education, and this became the basis of our distance education model, which today has over 50% of the students studying by this method.

By 1983, there were over 2400 student enrolments, and a new course in Futures Trading was introduced. Five years later in 1988, the student numbers had grown to 10,700 and distance education was formally introduced. This massive growth in student numbers reflected the strong market growth at that time and the need for qualified people to operate the market.

By 1992 educational courses were presented on behalf of 13 other organisations and this was representative of the Institute recognising the need to work not just for its own members, but for also other players in the industry, which were in alignment with our mission statement of raising standards. Three years later in 1995 specialist streams were developed, and more importantly there were 360 CPD events held. CPD events are functions like luncheons, with CEO speakers, technical seminars and corporate briefings on medium size companies. This is important because it demonstrated an early recognition that education is not just limited to award courses or an exam, but was an ongoing lifelong experience.

By the year 2000 the first graduates had completed the Securities Institute Master of Applied Finance and Investment award course. The decision to develop a Masters program represented a significant challenge for the Securities Institute. Would the Institute be able to compete with universities and would the significant cost of establishing a Masters program be beneficial in the long term? The cost of establishing Master units was approximately AUD \$100 000 per unit and 8 units were needed for a viable Masters program. It has taken more than three years for that investment to reap rewards for the Institute, but now the Masters program is the fastest growing education course for the Institute, and it is the flagship product that we offer both domestically and overseas.

In 2003, there are nine accredited award course including the Masters, there are over 17 000 students in Australia and 1200 studying outside Australia in 52 different countries and all courses contain online elements. It seems that clearly defining a mission statement in the outset and being able to adapt to and redefine your market needs has allowed the Institute to grow into the organisation that it is today.

## So what is the Institute today?

### An overview of the Securities Institute today



- Not-for-profit membership organisation that is owned by the members
- Fully self-funded from course fees and member subscriptions
- IP developed from industry practitioners
- 150 employees and 1,200 industry practitioners
- Annual revenue of over \$30million
- CBD lecture facilities in Sydney, Melbourne, Brisbane, Perth and Adelaide

The Securities Institute is a not for profit membership organisation that is owned by its members. It is fully self-funded from course fees and member subscriptions. Intellectual property is developed from industry practitioners, unlike universities, which employ academics for this purpose. Currently there are 150 employees and 1,200 industry practitioners contributing to our course material. We have annual revenue of over AUD\$30 million and have lecture facilities in Sydney, Melbourne, Brisbane, Perth and Adelaide, as well as having well over 8,000 studying by distance education in Australia and around the world.

Our education business is focused on Post Graduate and Open Entry finance education. There are many other players in the financial services education market, but the following two tables outline the 12 major players.

## The Australian financial services education market



Association	Industry	Members	Focus	IP/ Ownership of education	Strength
SIA	Stockbroking, mortgage, finance, financial planning	14,000	Education	Own content	Education. Across many industries
SDIA	Stockbroking	1,300	Professional standards	Outsourced	Represents 98% of stockbroking industry
AFMA	OTC finance markets	6,000	PD, accreditation, licensing	Own content	Peak body in OTC finance markets
FPA	Financial planning	14,000	Education, PD, representing industry	Previously outsourced, setting up education unit	Represents financial planning industry
ICAA	Accountants	35,670	Designation, professional standards	Outsourced	High quality
CPA	Accountants	94,000	Designation, professional standards, membership	Outsourced to universities	Large membership, international recognition

# The Australian financial services education market



Association	Industry	Members	Focus	IP/ Ownership of education	Strength
SIA	Stockbroking, mortgage, finance, financial planning	14,000	Education	Own content	Education. Across many industries
ASFA	Superannuation	600 funds	Education, PD and industry representation	Own content	Focus on superannuation
MIAA	Mortgage	3,173	Education, PD and membership	Outsource	Growing industry
AIBF	Banking & Finance	13,000	Accreditation, industry representation	Previously outsourced, now developing own course	Long history
ANZIIF	Life & general insurances, investments	11,000	Education, PD and membership	Outsource	Well known but in declining industry
Integratec	Financial planning	1,300 subscribers	Education	Developed by Deakin University	Cheap and efficient

It is interesting to note that the key players usually have an individual focus on stock broking, wholesale financial markets, financial planning, accounting, superannuation, mortgage industry or banking. The Securities Institute is the only player that operates across all these areas. Another point to note is that the Securities Institute is the most significant provider of the whole group with the most students. Education has become the major source of revenue for the Securities Institute due to its student numbers and breath of operation.

## The SIA mission today

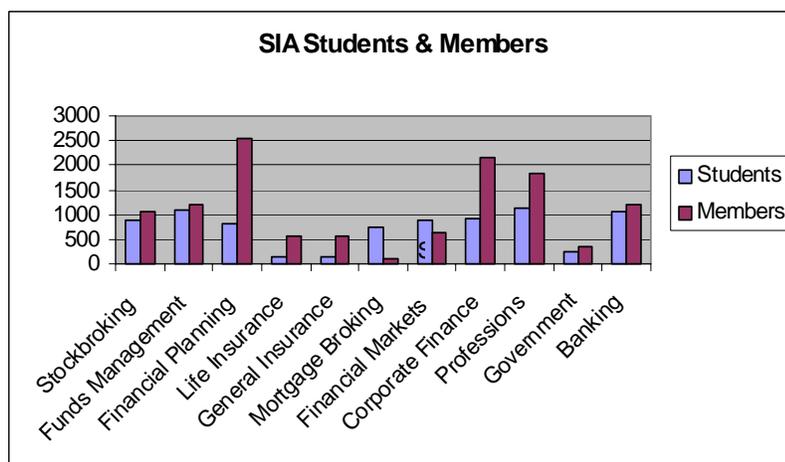


*The SIA is committed to raising standards in the securities and financial services industry by:*

- *Providing practical, contemporary and innovative education and training programs*
- *Fostering ethical and effective markets*
- *Advocating high levels of professional conduct*

It is interesting to note that our mission statement has not changed significantly since 1970. The principles and focus for the Institute has been constant for the past thirty years. It is also interesting to note that even in 1970 it was seen that education was the first priority for the Institute, and it is that focus that has allowed us to grow to what we are today.

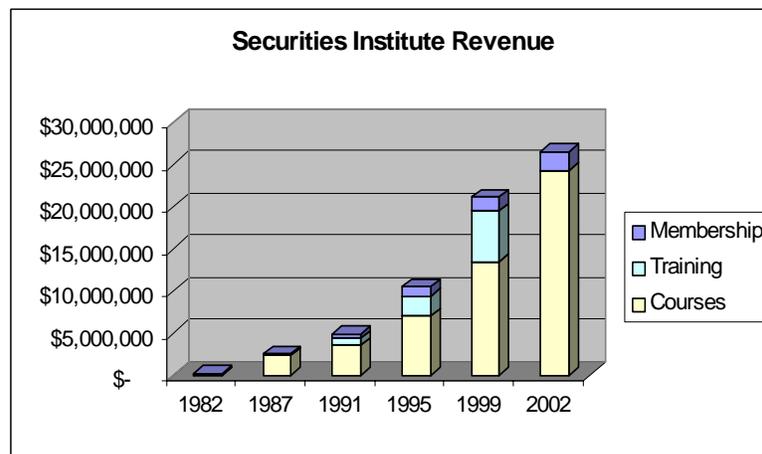
## SIA industry representation



This chart shows just how broad the range of students and members the Institute has. What is interesting to note is that one of the most significant sectors, financial planning, just didn't exist ten years ago and that represents one of the major growth areas for the Institute today. The traditional areas of stockbroking, funds management and corporate finance are relatively static with fewer numbers of participants controlling larger sizes of the market. This diversification has been very important to maintain the growth for the Institute in the past seven years.

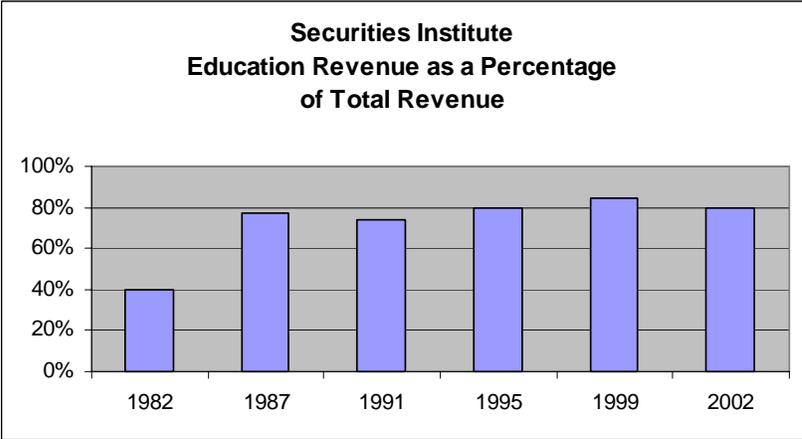
This chart shows the history of student and member numbers for the Institute. It is interesting to note that student numbers have been fairly volatile over the years with very strong growth in the late 80's, negative growth in the early 90's and then a strong growth in the mid to late 90's. On the other hand our membership has been steadily growing since our inception. It is a much more stable growth pattern and less affected by industry trends. The combination of the two is important in providing us with a consistent and sound student and member revenue base.

## SIA revenue



Putting those two things together, you can identify that over a period of time that the revenue of the Institute has grown and has been consistently growing, but the mix of the revenue has changed. You will notice the light blue area, Training. This relates to short, non-assessed courses that have began to form a larger part of the Institute's overall revenue. In 2002, although there is not a light blue bar shown, the Training revenue would show a similar growth trend. The other interesting point is that membership revenue is relatively small compared to education.

# SIA education revenue

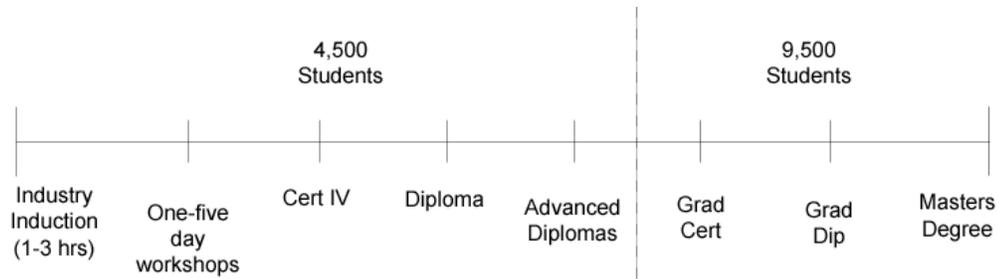


Even though that proportion is relatively small, this chart demonstrates that the relativity between education and membership revenue has remained mostly constant since the mid 80's. Therefore education provides approximately 80% of the Securities Institute revenue, and has consistently done so since the mid 80's.

# SIA education product range



SECURITIES INSTITUTE

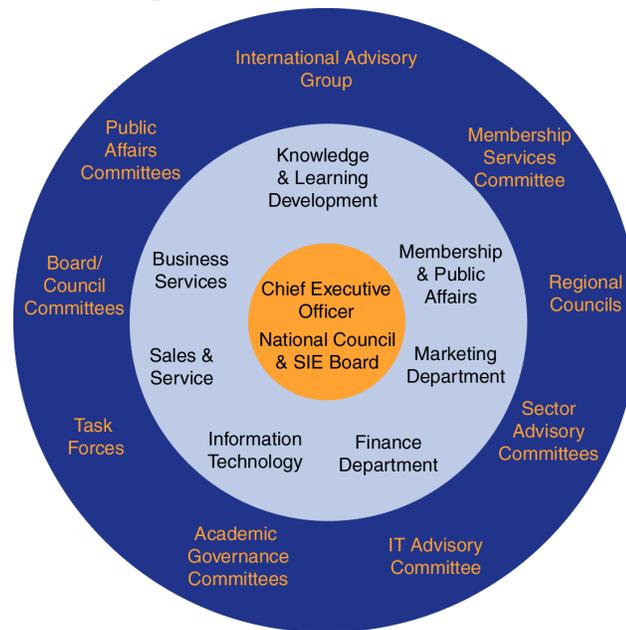


This chart shows continuum of the range of products the Institute has on offer. On the far left we have the simplest and least complicated product, Industry Induction. It runs for 1 to 3 hours and is usually provided in-house for corporations to allow new employees to gain an understanding of the financial services market. What is interesting from our point of view is that it provides a good source of new students into the other advanced courses such as the Diploma or Graduate Diploma courses. Moving up the continuum we have 1 to 5 day workshops, which again are run mainly for corporate clients, but we also offer them as public workshops. These are typically related to a specialist area within the industry. As we move up the scale, we see our first assessed courses, Certificate IV, which generally relate to specific vocational areas. Moving further, we offer Diplomas, which are undergraduate assessed qualifications and Advanced Diplomas, the highest level of undergraduate assessed qualifications. Continuing up the scale we cross into postgraduate territory: in other words, courses that require a Bachelors Degree initially before you are eligible. There are three main postgraduate courses, including the Graduate Certificate, Graduate Diploma, which is the core Institute product and has been running for 10 years, and the Masters degree, which is the most recent addition to the postgraduate line up.

# How the SIA functions



## Key functional groups



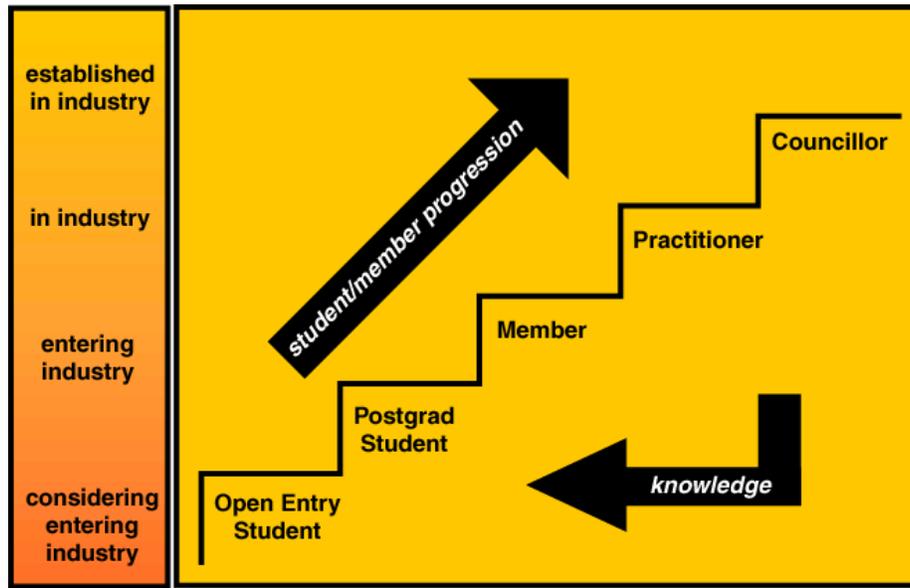
This chart represents how the Institute is organised and how it interacts with internal and external parties. The outer blue ring represents the external committees and advisory groups that provide input to the Institute. These are essentially the 1200 practitioners that provide our intellectual property, give us guidance and help us operate our education business. Within this group, it is worth noting that task forces are the groups that provide the IP on specific subject set course curricular. Academic Governance Committees, as the name suggests, provide general steering and direction on our overall courses. We then have specific groups related to key areas of Institute functionality.

As we move into the circle, the light blue middle section relates to the structure of the Institute itself. This group contains the full time employees of the Institute and is essentially divided into seven core national areas:

- Knowledge and Learning Development – who develop, deliver and produce our courses
- Membership and Public Affairs – who provide membership services, policy and advocacy services for members
- Marketing Department – which is involved in market development, market segmentation, market understanding as well as the traditional advertising and promotion
- Finance Department – tracks, records and supports the business units’ financial operations and is responsible for managing the Institute’s reserves and investments.
- Information Technology - underpins our operating systems and provides the front end systems for student and member interaction.
- Sales and Services - consists largely of regions and the customer facing areas that support the regions. This is the largest part of the business and is responsible for all direct customer interaction.
- Business Services – supports the other business units and other area needs, such as tender and document preparation, logistic of operating and running courses, company secretary and other Institute functions.

Moving into the centre section, this is held together by our Chief Executive officer, who reports to our National Council and Board. Our National Governance Council is divided into two key areas, the Securities Institute Education Board, which looks after education business, and the Securities Institute National Council, which is responsible for the membership business. These are one and the same group, but are divided into separate entities for management purposes.

# The SIA Practitioner Model



Now that I have covered how we are organised, let's have a look at the core of our business and the practitioner model. The practitioner model has enabled us to have a unique competitive advantage throughout our thirty-seven years of operation and underpins how we work in the market place. Essentially it is a revolving model: on the left hand side you can see various stages throughout the industry. The bottom left we have people considering entering the industry and as you move towards the top of the chart, people are well established and well experienced in the industry. On the left section of the chart there are various stages at which the Institute interacts with people in the industry. An individual may enter as an open entry student who is considering entering the industry or as a postgraduate student or may already be within the industry. Students progress up the stepladder and encouraged at all stages to become members of the Institute. As members, they receive a number of member benefits, and after a number of years of experience, we ask some of them to provide services back to the Institute, usually as a practitioner. As I have mentioned earlier, practitioners provide input into all the major function of the Institute. This enables us to be relevant to the market and have the ability to constantly adapt to changing market needs, because it is the market itself that helps guides us.

The group that coordinates the various practitioner and management groups is the National Council. This is considered the most important role for our most experienced practitioners. At various stages throughout the levels, knowledge is delivered down and disseminated to the rest of the industry. As that industry knowledge is developed from both the Institute and understanding gains from working in the industry, this knowledge is delivered back to the Institute through various levels of member, practitioner and councillor. It is this constant flow through the model that keeps our education courses and member services working.

## Advantages of practitioner model



- Uses applied knowledge and understanding
- Harder to copy without membership structure
- Controls cost of intellectual property
- Quality and feedback is self-regulating
- Provides a progression path
- For the industry by the industry

It is worth noting the core function of the Institute is a conduit to allow information exchange to happen. In other words this may occur in the industry informally, but the Institute organises this to happen in a structured way and it is that model that has allowed us to have that depth and breadth of services that we offer today.

Like all things, this model has various advantages and disadvantages. The core advantage of the practitioner model is that it uses applied knowledge and understanding gained from within the industry. This makes sure that the Institute is always relevant and up to date. The model is harder to copy without a membership structure, so it means, in terms of barriers to competitors entering, that once you have established yourself with this kind of model, it is quite difficult for others to set up as competitors, although still possible. The other advantage is that it controls the cost of intellectual property. Although the Institute remunerates its practitioners, it does so on more of an honorarium level rather than what the practitioners may be actually worth in the industry. This allows us to control the cost of our intellectual property and deliver better value services to new students coming into the industry. Practitioners are also willing to give up their time and services to us, because they know that it is delivered straight back to the industry, in other words it is a direct benefit to the industry. The quality and feedback in this model is self-regulating because the industry provides the course structure and materials which is delivered to others in the industry, and feedback on developments come from the industry itself. So in the event of a particular subject or course becoming less relevant, we are able to correct it sooner rather than later. Another advantage of this model is that it provides a progression path for individuals through the stepped process from student to member to practitioner and then on to councillor, for those who are willing to take that challenge. The progression path is viewed positively in the industry and Securities Institute involvement appears on many people's curriculum vitae as one of their credentials or achievements.

Finally, summing up the advantages - it is for the industry, by the industry.

## Disadvantages of practitioner model



- Supply of practitioners
  - Higher working demands placed on practitioners
  - Emerging fields
  - Rapid pace of change
- Scalability
- Higher delivery expectations

However this model is not without drawbacks: there are some difficulties within this model and these challenges will get bigger as we face the future. The core difficulty with this model is having an adequate supply of quality practitioners. There are three main barriers to this. Firstly, the higher working demands based on individuals active in the industry means they have less time to give to the Institute, because their employers are requiring more from them. The next issue is that within a changing environment we have emerging fields and new areas that require education. Because they are new, the amount of practitioners is sometimes limited, so education demand is highest in new areas and practitioner supply is limited. This means the Institute must carefully select practitioners, and in the initial stages make sure we have our network of qualified people to deliver those areas. The third element is the rapid rate of change in the industry examinations. The Institute needs to constantly re-skill and reposition practitioners and our own delivery models to meet market needs.

Another challenge facing this model is scalability. If we have large area of demand for particular topic areas there is a limited number of practitioners we can draw on to provide that. Therefore the Institute needs to offer alternative delivery methods that make more efficient use of practitioner resources, and this can include online learning, revised assessment methods and the use of practitioners combined with contract delivery people.

The third challenge facing the practitioner model is that people have higher delivery expectations. Practitioners by their very nature are working in the industry. Their first and foremost qualification is their knowledge and experience in the industry. Our students and customers have high delivery expectations on how information is delivered, and we constantly need to train practitioners in delivery methods to ensure that the presentations they are marketing and the interactions with students meet the higher expectations that have been developed by other tertiary studies.

## The key learnings from this model



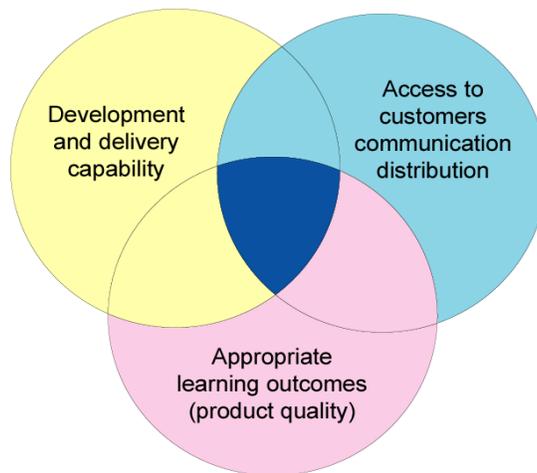
- Content is always relevant
- Efficient cost of production
- Harnesses the natural goodwill that exists in the industry
- Needs an active membership association to support it
- Needs a recognised and respected brand to support it

So we have examined how the model works and the advantages and disadvantages of the model. What are the key lessons of the model? Well, there are five key lessons from this model. Firstly, the content is always relevant. Secondly, there is an efficient cost of production. Thirdly, it harnesses the goodwill that exists in the industry, but it needs an active membership association to support the practitioner model. But most importantly, the practitioner model needs a recognised and respected brand to support it: practitioners will not give up their time to an organisation that they do not respect and students will not spend their time, effort and money doing education courses that are not going to be respected in the industry.

# A sound financial structure



- ❑ Competitive advantage
- ❑ Consistent
- ❑ Resilient
- ❑ Adaptable
- ❑ Sustainable
- ❑ Governance
- ❑ Stewardship



So what does a sound financial structure look like for an education provider? For this presentation I do not plan to go into any specific detail because you will have different needs and understandings, but rather I would like to cover the key principles that would underpin a sound financial structure. Firstly, an organisation must have competitive advantage. It must be able to do things better than its competitors and have a value proposition that is attractive to its customers. Secondly there must be consistency over time, particularly in the education market because education demand is something that is driven by reputation, and reputation takes time to develop and deliver consistently, which is critical in doing that. Thirdly, the model has to be resilient to change. We saw in our own model student declining significantly in the early 80's yet membership rising. So the model has to have a range of different sources of funds so that it can withstand volatility in demand, which is inherent in financial markets. Fourthly, the organisation must be adaptable. It has got to be able to change and adapt to changes in market needs which can include progressing down paths that were not anticipated and more importantly, picking the right path to go down.

The financial structure must be sustainable. It must be able to endure into the future and have a robust structure that can provide constant revenue and keep costs under control.

The sixth key element to a sound financial structure is governance. The appropriate principles and practices must be put in place to prevent in proper or inappropriate use of funds and to keep customer and market confidence. Finally the issue of stewardship is critical. By stewardship, I mean looking at the needs of the industry and the community at large and not just the needs of the organisation. One of the things that have helped the Institute in this area is our mission statement. Primarily it is about raising standards in the financial services industry, and if that means working with competitors by looking at ways to raise standards that are not producing the maximum return, then it fits within the Securities Institute mission and it is something worthy of doing. It is stewardship that contributes to our reputation in the industry. Stewardship is something that is developed over a period of time and underlies the very principles of a sound financial structure.

The other principle around sound financial structures I would like to put forward is the alignment of resources. The diagram to the right of the chart explains this. Sound financial structure is achieved by the alignment of your development and delivery capability with your access to customers or distribution and the appropriate product quality. When all three aspects overlap, then products are produced and distributed to markets to meet market needs in a most efficient method. In many organisations, including the Securities Institute, there is often overlap. Often only two of these areas overlap, but in the achievement of overlapping all three, then products are developed and delivered to markets in the most efficient way.

## Financial snapshot of the SIA in 2002

Annual revenue	→	AUD 30.5 M
Cash reserves	→	AUD 10.4 M
Operating surplus	→	AUD 3.4 M
Members	→	10,500
Students	→	18,000
Full-time staff	→	150



So what does the Securities Institute look like today? Well, at least in 2002, when the last annual report was completed, we had annual revenue of AUD \$30.5 million. There were cash reserves of AUD \$10.4 million, which offered an operation surplus of AUD\$3.4 million. There are 10 500 members with 18 000 students and 150 full time employed staff. The challenges we face going forward are maintaining and developing this foundation and continuing to grow by offering services in raising standards in the financial services industry. To do this we will need to continue to develop products and services and keep in touch with the changing and developing needs of our market.

# SAAJ and Its Financial Base

## Sei-Ichi Kaneko

### 1. What is SAAJ ?

The principal purpose of SAAJ, the Security Analysts Association of Japan, is to provide education for securities analysts. At the core of this effort are correspondence courses for the Association's CMA designation which attracts more than 10,000 annually. The related examinations are held in eight centers in Japan and three overseas (Hong Kong, London, and New York). In the context of continuing education for members, the Association holds about 20 seminars and 600 company presentations a year. The *Security Analysts Journal*, which has a circulation of about 20,000, is published monthly. The Association also publishes Performance Presentation Standards and presents analyst opinions to the Accounting Standards Board of Japan.

The CMA (Chartered Member of the Security Analysts Association of Japan) designation is awarded to those who have successfully passed two levels of examination. There are currently 18,000 CMAs who are individual members of SAAJ. Additionally, there are some 520 corporate members, most being financial institutions – although a relatively small number, they have been great supporters of the Association, particularly in the past, and without their help the Association would not be where it is today.

SAAJ is a sort of NPO (non-profit organization) with the legal status of 'public interest corporation' authorized by the Financial Services Agency. Being an NPO, the Association is exempt from paying corporate tax provided it adheres to its objective of providing education to securities analysts.

Income in the most recent financial year was about 1.4 billion yen (US\$13 million). Capitalization is 3.3 billion yen (US\$30 million), evidencing a rather strong equity base compared to income. The Association employs 35 full-time staff.

### 2. Brief History

SAAJ was established in 1962. The trigger for this was that in April of that year, 131 securities analysts visited Japan from New York to study Japanese companies and its stock market. Then, in September, a further 92 visited, this time from San Francisco. Counterparts and others in the investment community in Japan thought that if such visits continued Japan should have an organization to welcome them, which was how the SAAJ's predecessor organization, the Tokyo Securities Analyst Association was born. In addition to meeting foreign analysts, the Association began to arrange company presentations, the first being given by the president of Nissan Motors – an epoch-making event as it was the first occasion for the chief executive of a big company to talk directly to securities analysts.

1965 was a bad year. The stock market crashed and a major securities house was about to go bankrupt. As a result, the Association's finances were seriously impacted. Then, in 1968, Minoru Segawa, then president of Nomura Securities, the largest securities house in Japan, was named Chairman, ushering in a new era. Segawa exhibited his leadership and power by raising funds and, in 1973, 300 million yen (US\$2.7 million) was injected as capital, and the Association's financial base was firmly established. Major financial institutions and public corporations like stock exchanges contributed. At the same time, the Association was reorganized as a 'public interest corporation'.

During the 1970s, the Association studied how to introduce an education and examination program for securities analysts, as a result of which the articles of incorporation were changed in 1979 and it was officially decided to provide education and examinations for analysts. This decision significantly changed the nature of the Association. In 1980, in order to prepare for the new activity, the Association raised 150 million yen (US\$1.3 million) to further strengthen its financial base. The first examinations were conducted in 1981.

In 1993, the education and examination program was thoroughly revised. While the original program emphasized analysis of individual companies the new one focused on portfolio management and quantitative analysis. The revision not only affected the curriculum but also textbooks and examination compilers. Much younger scholars and practitioners came to be involved and the new program was well accepted by the financial community and the number of applicants significantly increased. Thus, the Association entered another growth period.

In 2001, the SAAJ held the first CIIA (Certified International Investment Analyst) examination of the ACIIA (Association of Certified International Investment Analysts). The CIIA is beginning to be accepted as a de facto Level 3 examination. Next year, SAAJ plans to introduce a basic course with CCMA designation with the aim of broadening the student base.

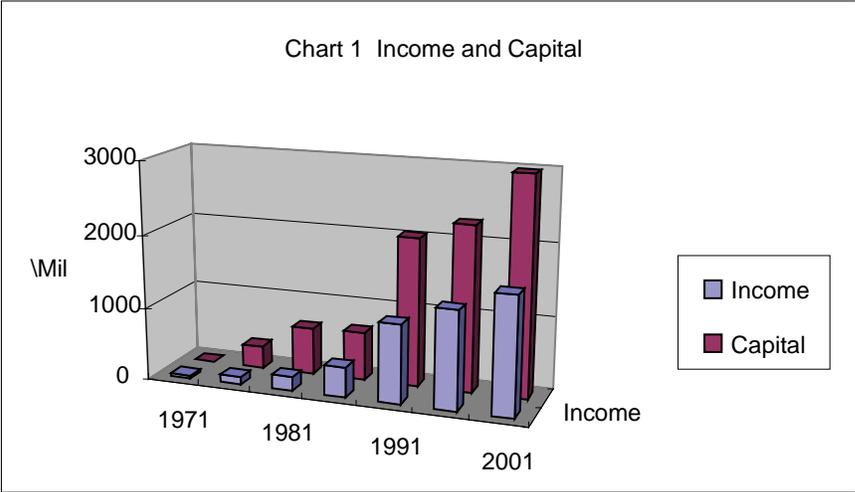


Chart 1 shows SAAJ's history in figures. In 1971, income was 40 million yen and capital a mere 2 million yen. Some 30 years later, income was 1.6 billion yen and capital stood at 3.0

billion yen. Income had grown 40 times and capital 1,500 times. In terms of compound annual rate of growth, which all we analysts love, income grew at 13.1% and capital at 27.6%, very respectable figures.

### **3. Secret of Growth**

Why did SAAJ grow so fast? What was the secret? SAAJ's history can be divided into several periods, and the secret of success in each can be identified. In the infancy period, you have to have a good and solid purpose. In SAAJ's case, it was to welcome foreign analysts and to listen to presentations by presidents of major companies.

In the next stage, or the base building period, you need to have a strong leader who is respected in the financial community. Under the leadership of Minoru Segawa, many financial corporations supported the Association.

Once, you have established a solid base, you then have to consider whether you should expand activities or not. In the late 1970s, SAAJ decided to expand into education and examinations. Prior to this, it was basically a friendly society of analysts, occasionally getting together for company presentations, but after this it became an education provider.

When you offer education, you have to offer good education. Only good teachers can offer good education, so a team of top-notch scholars and practitioners was organized for the program. But education is an endless game. One has to constantly strive to make it better. The major revision of the CMA program in the early 1990s led SAAJ to a further growth period.

### **4. CMA Program**

The CMA program is based on distance education or correspondence courses. Textbooks are sent to candidates who send back answers to problems and ask questions. The program comprises two levels: Level 1 which involves six hours of examinations, and Level 2, seven hours.

The exams cover four subjects: Security Analysis and Portfolio Management, Economics, Financial Accounting and Financial Statement Analysis, and Ethics. Ethics is only tested at Level 2. At Level 1, candidates have to pass the former three subjects individually. The exam time is three hours for Security Analysis and Portfolio Management and one-and-a-half hours for both Economics and Financial Accounting and Financial Statement Analysis. In Level 2, all four subjects are tested, but a pass or fail is determined as a whole, not subject by subject. This is partly because of the need to secure flexibility in allocating points among subjects, and partly because some Level 2 questions are integrated, cross-subject problems.

One technical point about Level 2 is that a minimum number of points is required for Ethics. If a candidate does not meet this requirement, no matter how good he/she was in other subjects, he/she will not pass. In other words, a smart person who does not give enough attention to Ethics is regarded as unethical.

One major decision that has to be made when providing an education program is whether you will compile textbooks and other study materials yourself or use materials already available. When SAAJ first embarked on the program, no good textbooks were available, particularly so in the case of Security Analysis and Portfolio Management, so there was no choice but for SAAJ to compile them. Preparing textbooks is costly, but the advantage is that they can be tailor-made according to ones needs. AIMR, the American analysts society, initially used materials available in the market, but began producing its own a couple of years ago.

In compiling study materials and exam questions, SAAJ uses outside talent and employs a committee system. The Education Committee designs the overall program and sets strategies based on recommendations made by the following five committees: the Curriculum Committee which specifies the curriculum and organization of textbooks; the Education Management Committee which decides the format of the examination; the Examination Committee which writes exam questions; the International Examination

Committee which is in charge of CIIA examinations; and the Basic Education Committee which oversees the basic education course to be introduced. In total, these committees have about 70 members. The largest is the Examination Committee with 40 members. SAAJ is proud of its committee members, all of whom are top-notch scholars and practitioners. Their names are one factor in attracting candidates to the program.

Now, how can one build a team of first class people? There are three key factors. The first is to catch a big name. Scholars are nervous about with whom they work. Once a big name is there, it is easy to solicit others. The second is to give intellectual stimulus. In our Examination Committee, members write question but only 50% of the questions presented are adopted. Competition makes them serious. The third key factor is, of course, to pay well.

This year, more than 15,000 Level 1 examination papers were taken. This is the total number for all three subjects – some candidates took all three subjects, while others took only one or two. The actual number of individuals who sat Level 1 exams was 8,400. Some 3,900 candidates took the Level 2 exams. As Level 2 is not divided by subject, this figure was also the number of papers sat. The pass rate was 47.7% for Level 1 and 39.2% for Level 2.

These pass rates are lower than for the CIIA or CFA examinations, but SAAJ does not intend to raise them artificially. Of course, if candidates studied harder and the rates rose naturally, that would be welcomed. Also, SAAJ is making every effort to make its textbooks attractive so that candidates will study harder. But, not under any circumstances will the pass rate be artificially controlled. This is very important in order to maintain the integrity of an education program.

What is a typical candidate's profile? Usually someone who joins a financial institution after graduating from university, who is busy the first couple of years taking various qualifications required by the industry, then, in his/her late 20s signs up for SAAJ's CMA program to further enhance their knowledge and skills, takes two years to pass Level 1 and then another two to pass Level 2, and finally obtains the CMA designation in his/her early 30s.

What do they do for a living? According to a survey of candidates who passed Level 1 this year, 30% are in the investment business. The remaining 70% are in marketing or the back offices of financial institutions and 'others'. 'Others' includes people working for non-financial companies and students. Though SAAJ provides education for securities analysts, the majority of candidates are not analysts or even in the investment business. It seems that many take the exam to demonstrate their ability and efforts to their employers. Employers encourage this not only by officially recognizing the achievements, but also by paying the fees. Typically they pay half of the fees on enrollment, and the balance when their staff pass the exams. Some financial institutions even offer prep courses for their candidates. Hence candidates are not limited to investment people. This is a very unique feature and SAAJ hopes such non-investment people find the program both challenging and rewarding.

## **5. Fees and Income Composition**

The enrollment fee for Level 1 exams is 48,000 yen for employees of corporate members, and 54,000 yen for others. For Level 2 there is no discount for corporate member employees and the fee is 51,000 yen for everyone. These fees are effective for three years. If a candidate does not pass within that time he/she has to pay the fee again. Repeaters are a good source of income. It costs 12,000 yen to sit for Level 1 exams and 8,000 yen Level 2 exams. Hence, the total minimum cost to obtain the CMA designation is around 120,000 yen (US\$1,100).

Is this cheap or expensive? The minimum to pass the CFA is US\$1,300. As the CFA is a three-level examination, SAAJ's may seem a bit expensive. However, SAAJ provides more custom-made study materials. Therefore, the fee schedule is, by and large, the same between the two examinations.

As for membership fees, CMAs pay 10,000 yen for admission and 18,000 yen annually. CMAs receive a free copy of the *Security Analysts Journal* and can participate in company presentations free of charge. Participation in seminars is at a discount. For corporate members, admission is 50,000 yen and 50,000 annually. Some corporate members voluntarily pay more annual fees than the minimum.

In contrast, CFAs pay an annual fee of US\$225 plus local society fees, the latter varying from society to society but typically more than US\$50 dollars. Thus, their annual fees are much higher than those of SAAJ.

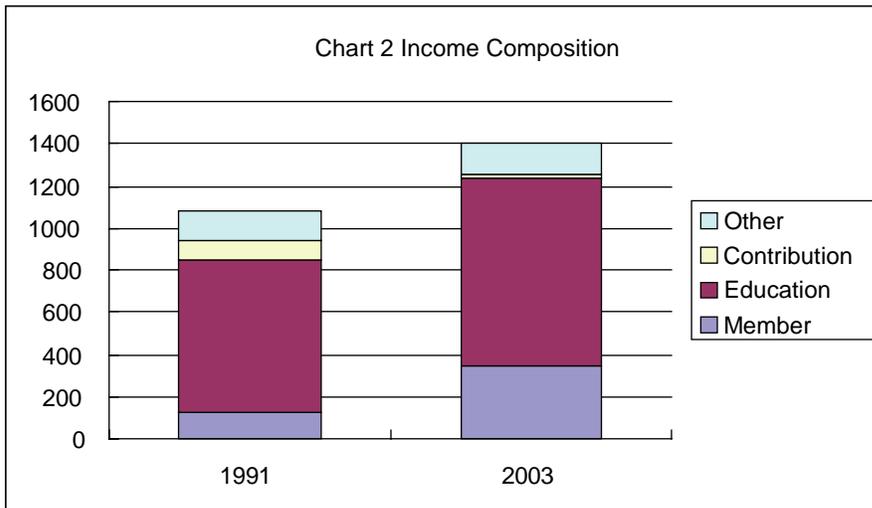


Chart 2 gives a breakdown of income for 1991 and 2003. Education income grew from 720 million yen to 870 million yen, but as a proportion of total income decreased from 67% to 62%. The proportion of membership fees, on the other hand, increased from 11% to 24%. The composition of membership fees has changed dramatically. In 1991, 80% of membership fees came from corporate members. Today, 90% of fees come from CMAs. Thus, today, SAAJ enjoys stable income from diversified sources.

## 7. Paradise or Paradise Lost?

How could SAAJ achieve such a solid financial base? What is its strength? First, committee members are top scholars and practitioners who provide first class textbooks and examinations, hence establishing a strong brand. Second, SAAJ has no direct competitors, and it would be practically impossible for new entrants to establish a solid footing because major professors and investment specialists are already tied to SAAJ. As a result, SAAJ has a strong balance sheet.

Some may think this a paradisiacal situation. But, in this world, paradise will not last forever. Unfortunately, this has also been SAAJ's experience.

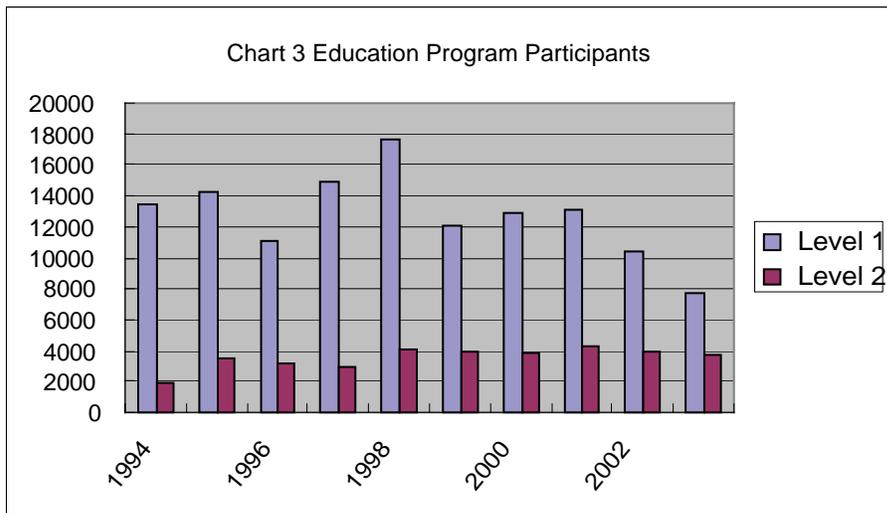


Chart 3 shows participants (those who signed up and paid fees) in the CMA program. Level 1 participants decreased sharply from a high of 17,600 in 1998 to 7,600 in 2003. A 57% drop. The situation for Level 2 exams is relatively flat, but eventually the drop in Level 1 will be reflected in Level 2. The latest figure, 3,700, is already only 85% of the peak marked two years ago.

How has this decline in number of candidates affected the income statement? The latest figure of 1.4 billion yen is 20% shy of the peak of 1.7 billion yen marked four years ago. What does one do when income shrinks? Reduce expenses. SAAJ's latest expenses are 78% of their peak, so the balance, or gross surplus, remains in good shape as seen in Chart 4. Cutting costs, however, will not solve everything. If the current decline in candidate numbers continues, SAAJ will have to fundamentally change the way it operates.

Why has the number of new candidates declined so sharply? The poor economy and stock market are the obvious villains. From a high of over 39,000 in 1989, the Nikkei Stock Average posted a low of under 8,000 this past April – a whopping 80% decline over 14 years. Such a stock market decline has an adverse impact on the economy in general, but, as Japanese banks and insurance companies are major shareholders, the sharp stock market drop directly affected their financial statements. Some major banks, insurance companies, and securities brokers went bankrupt and many of the remaining ones merged to survive. Naturally, they reduced staff numbers. We have seen that a typical new Level 1 candidate is someone from the financial industry in their late 20s – today, those who sign up were first employed five years ago. But new hiring by the financial industry has worsened significantly during the period, so we cannot expect much improvement in the influx of new people for the coming five years.

Demography paints a darker picture. Japan's population is about to hit a peak and then decline, which, in the long term, will affect SAAJ. Those who will be 25 ten years from now are presently 15 and the number will not increase unless there is immigration into Japan. Even in this case, it is rather unlikely that many would take SAAJ examinations.

And finally, it seems that the psychology of younger people is changing – now they tend to limit their future early, or they are perhaps smart and realistic. As mentioned, many exam candidates are not in the investment business but dream of being so and therefore study. If people tend to limit their possibilities earlier, SAAJ might lose this valuable segment. Hence, in a nutshell, it is a long-term trend and a short-term reversal cannot be expected.

## **8. Commitment for the Future**

What can SAAJ do? If the market shrinks by half, then one only needs to cut fat. However, major changes are usually accompanied by new opportunities. If these opportunities can be identified, SAAJ could take advantage of its strengths, namely a team of first class specialists and accumulated intellectual property and know-how. We have seen that younger people tend to limit their possibilities earlier, which means they are more diversified. If younger people's needs are more diversified, we only need to offer more diversified education programs. For beginners, we propose to offer a Basic Education Course, introduce a new designation called CCMA, and emphasize the CIIA as a de facto Level 3 examination. We also plan to make another major revision of the CMA program. SAAJ's intention is to serve a broader base of people with better content.

### **(1) Basic Education Course**

The objective is to give a birds-eye view of Securities Analysis and Portfolio Management. The major candidate target group is university students and new graduates. We expect laypersons interested in financial markets will also find the program informative and challenging. This product will also be via distance education, but we will use the Internet to give tests to check progress. The fee will be 15,000 yen and examinations will be in December. In the following January, a certificate will be sent to those who pass. If a third-year university student gets the certificate in January, he/she can show it to potential employers as January-March is the high season for university student employment interviews.

### **(2) CCMA**

CCMA is an abbreviation of 'Candidate for CMA'. Some candidates and some important corporate members have voiced the opinion that for many jobs Level 1 education is sufficient, and that some sort of qualification should be given for those who passed the Level 1 exam. In short, they want something to print on their business cards. But, this is a dangerous request since a CCMA designation could tarnish and dilute the brand image of the CMA. Also, more candidates might quit at Level 1. On the other hand, a CCMA could motivate many candidates to at least complete Level 1. After lengthy study and discussion, it was decided to embark on a CCMA course. To become a CCMA, one has to pass all three Level 1 CMA subjects and also pass a short exam on Ethics. This is necessary as Ethics is not tested at Level 1. The fees will be 5,000 yen for admission and 10,000 yen annually. The *Security Analysts Journal* will be sent every month, and CCMA's can participate in seminars and company presentations.

### (3) Major Revision of the CMA Program

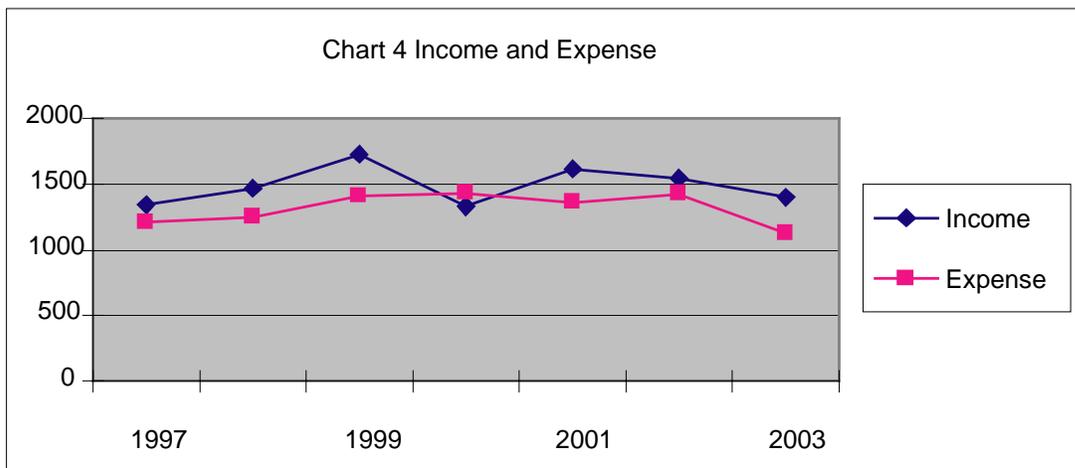
SAAJ also plans another major revision of its CMA program since more than a decade has passed since the last. Although minor changes are made every year, we are currently faced with some problems. As the candidate body is quite diversified, most commonly required knowledge used to be focused on. But, over the last ten years some materials and exam questions have become over sophisticated. Scholars have a natural bias to make things difficult to understand. So, from time to time, we need to have a systematic revision to make sure that they have not gone too far.

During the past decade, financial theory and products have continued to develop rapidly. Behavioral finance, credit risk models, and quantitative risk measurements are examples of a few areas that have developed significantly during the last several years. While these new areas need to be accommodated, it is not desirable to add a further burden to candidates, hence some existing materials should be deleted.

While SAAJ's Common Knowledge Base (CKB) itemizes necessary knowledge to be a CMA and is a guideline for writing textbooks, it does not stipulate at what level knowledge should be studied. Hence, SAAJ plans to tie particular knowledge to a particular level to facilitate candidate study.

The second solution is to change the subject category in Level 2. Newly developing areas are hard to place in a traditional subject. For example, credit models are half financial statement analysis and half portfolio management. A flexible subject category to accommodate these new areas is needed. Financial Products, Market Analysis, and Portfolio Management are three study areas being considered. This way, the weight can be changed more flexibly. It is not envisaged that Level 1 subjects will be changed as it is the level for building basic knowledge – traditional subjects will facilitate better study. Overall, the goal is to provide a flexible, always up-to-date, and user-oriented education program.

Education is an endless game, and SAAJ is determined to continue to play it. If it continues to play it well, candidates and income will surely follow.



# Management and Operation of Education Programmes and Examination System

**Gary Cheung**  
**Hong Kong Securities Institute**  
**September 2003**

## **1. Background**

Economists and educators have long been accepting that better-trained, professional, and quality workforce leads to higher productivity and greater competitiveness in the worldwide economy. In the specific context of Hong Kong, a quality and professional workforce is of paramount importance in enabling Hong Kong to climb up from the valley of recession.

The Hong Kong financial industry plays a key role in supporting the economic growth of Hong Kong. According to the Census and Statistics Department, the financial sector as a whole contribute more than 22% of Hong Kong's Gross Domestic Product in 2001 and employs over 440,000 employees which represents over 20% of the total labor force<sup>1</sup>.

With the implementation of Closer Economic Partnership Arrangement (CEPA) and the anticipated forthcoming Qualified Domestic Institutional Investor (QDII) scheme, it is expected that the Hong Kong financial industry will continue to play a key role in striving the economic growth of Hong Kong. To this end, the demand of quality finance professionals will prevail.

With the believe that quality and professionalism of workforce could be improved through the provision of appropriate trainings and assessments, the Hong Kong Securities Institute (HKSI), as one of the leading professional institutes in the finance sector, has offered various professional examinations and education programmes to improve the effectiveness and efficiency of the local financial market.

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<sup>1</sup>Hong Kong Annual Report 2002 34

## **2. Professional Examinations offered by HKSI**

To maintain the competitiveness of Hong Kong as an international financial center, Hong Kong practitioners must be able to take up the challenge to meet the practising standards set by international financial centers. To attain this goal, the HKSI offers a number of professional examinations to cater for candidates with various interests. They are:

1. Licensing Examination for Securities and Futures Intermediaries
2. Diploma Programme Examination
3. Stock Options Examinations
4. Mandatory Provident Fund Intermediaries Examination
5. Certified International Investment Analysts Examination

### **2.1 Licensing Examination for Securities and Futures Intermediaries**

To cope with the recent regulatory reform as well as the growing needs of market intermediaries and participants, the HKSI has offered the Licensing Examination for Securities and Futures Intermediaries (LE) since June 2003. The examination is recognized by the Securities and Futures Commission (SFC) under the “Guidelines on Competence” for fulfilling the registration requirements as Representatives and/or Responsible Officers.

### **2.2 Diploma Programme Examination**

The Diploma Programme Examination (DPE), which consists of three papers, is designed to test candidates on advanced level of finance principles, regulatory framework and issues, economic theories, accounting knowledge, and quantitative skills. Not only is the DPE recognized by the SFC under "Guidelines on Competence" for registration as Representatives and/or Responsible Officers, the DPE has also been accredited by the Association of Certified International Investment Analysts (ACIIA®), an international professional body with members from 22 countries and regions. DPE graduates are exempted from the ACIIA®'s Foundation Examination and National (Specific) Examination. They may proceed directly to the Final Examination to attain the CIIA® qualification. Furthermore, the Office of the Commissioner of Insurance (OCI) has approved the DPE as equivalent to its "Investment-linked Long Term Insurance" examination of the Insurance Intermediaries Qualifying Examination. Any person who has completed the DPE is eligible for exemption from the examination paper. In addition, the DPE has also been recognized by the Curtin University of Technology, Australia. DPE graduates are eligible for admission to the Curtin University Master of Finance Programme with three subjects namely Finance (Statement Analysis), Finance (Instruments and Markets) and Finance (Portfolio Management) exempted.

### **2.3 Stock Options Examinations**

The Stock Options Examinations (SOE) aims to assess whether candidates can fulfill the registration requirements of stock option trading in the securities markets. It consists of two examinations: the Options Officer and Representative Examination (OORE) and the Option Clearing Officer Examination (OCOE). Unless otherwise exempted by the Stock Exchange of Hong Kong (the Exchange), applicants who want to be registered with the Exchange are required to meet the examination requirements.

## **2.4 MPF Intermediaries Examination**

Passing the MPF Intermediaries Examination (MPF) is a mandatory requirement for a candidate to become an MPF intermediary. HKSI is a recognized examination provider by the Mandatory Provident Fund Schemes Authority to offer the examination.

## **2.5 Certified International Investment Analysts Examination**

Certified International Investment Analysts (CIIA®) is an international qualification for finance and investment professionals. At present, 22 national / regional associations including Austria, Belgium, Brazil, China, France, Germany, Hong Kong, Hungary, India,

Iran, Italy, Japan, Luxembourg, Netherlands, Poland, Russia, South Korea, Spain, Sweden,

Switzerland, Thailand and Ukraine have recognized this qualification. Since 2002, the

HKSI has been offering the CIIA® Final Examination<sup>2</sup>, which consists of 2 examination papers.

## **3. Professional Education Programmes provided by HKSI**

On the training and educational front, training courses in the HKSI are currently offered under 5 categories: (1) Continuous Professional Training courses, (2) In-house Training Courses, (3) HKSI Certificate Programmes, (4) Joint Programmes with Universities and Other Professional Associations, and (5) PRC Training Courses.

### **3.1 Continuous Professional Training courses**

The Institute is the first institute to be granted the “recognized institution” status by the SFC to offer Continuous Professional Training (CPT) courses. Certain courses, which are offered by the Institute, are also accredited by the Mandatory Provident Fund Schemes Authority (MPFA), and the Insurance Authority (IA) for meeting their CPT requirement. Content of the CPT courses, which last between 2 and 15 hours in general, is usually industry-specific and some of the topics covered include: revised Code of Conduct, common dealing malpractice, funds investment, technical analysis, stock investment techniques, derivatives and risk management.

### **3.2 In-house Training courses**

In-house training courses are courses that are developed and tailor-made for various brokerage firms, banks and insurance companies, such as Goldman Sachs (Asia) L.L.C., Morgan Stanley Dean Witter, UBS Warburg, ABN AMRO Asia Limited, American Express Bank, Citibank, Fidelity Investment Management (HK) Limited, JF Asset Management Limited, and so on. In general, in-house training programmes focus on market products, regulatory updates and compliance issues.

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<sup>2</sup>Up to June 2006, all HKSI Ordinary members and graduates of the HKSI Diploma Programme Examination may enroll directly into the Final Level of the CIIA Examination.

### **3.3 HKSI Certificate Programmes**

Certificate programmes are more structured in nature. They are usually longer than regular CPT and consist of a final examination imposed. These programmes have been devised into several modules and are designed to provide comprehensive and vocational skill training. At present, the Institute has been offering 5 certificate programmes. They are: (1) Certificate in Securities and Derivatives Dealing; (2) Certificate in Compliance Administration; (3) Certificate in Back Office Management; (4) Certificate in Financial Planning and Advising; and (5) Operation of Funds.

### **3.4 Joint Programmes with Universities and Other Professional Associations**

The Institute has collaborated with a number of universities and professional bodies, both locally and overseas, in offering the certificate programmes. These organizations include: Hong Kong Polytechnic University; Hong Kong University of Science and Technology; City University of Hong Kong; Open University of Hong Kong; The University of Hong Kong; Hong Kong Investment Funds Association; Canadian Securities Institute, and so on.

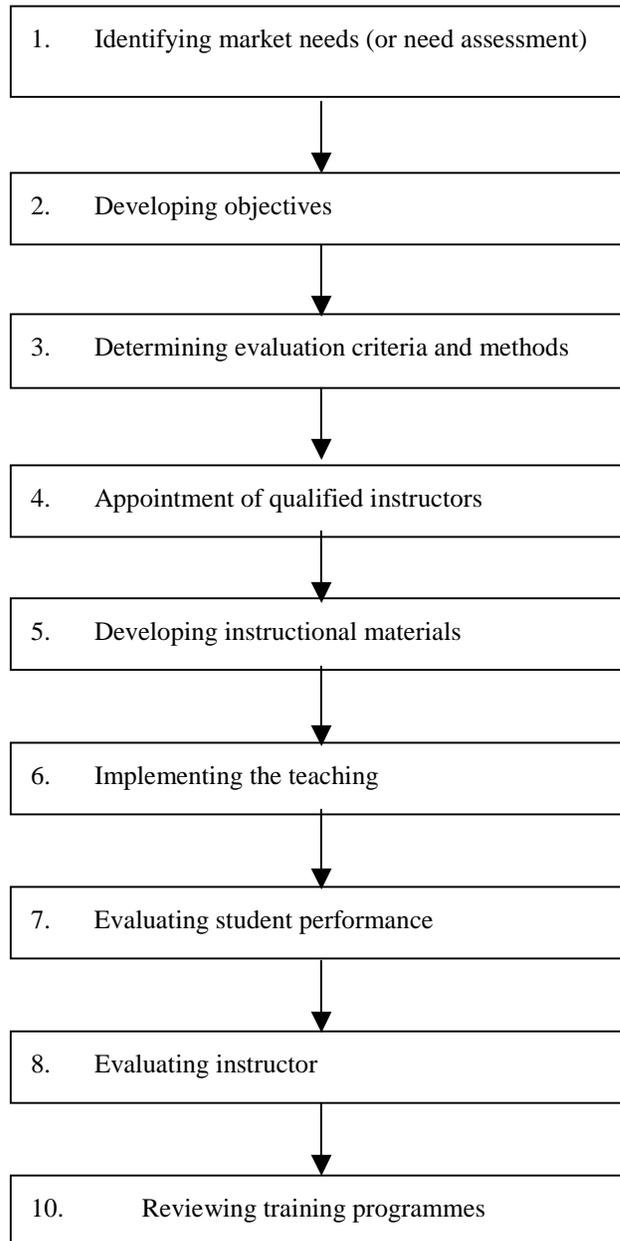
### **3.5 PRC Training courses**

Being a PRC State Administration of Foreign Expert Affairs Approved Training Institute, the Institute has been offering numerous training programmes for securities firms in the PRC. Such training programme is usually in form of executive workshop. This provides a platform for a robust exchange of the ideas and insights between the practitioners in Hong Kong and PRC, and greatly fosters the professional standard of the practitioners. A few examples of PRC training courses include:

- Shenyin Wanguo (HK) Ltd.: “Trading Strategies for Stock Index Futures and Trading Risk Management”
- National Science and Technology” Listing on the Growth Enterprise Market for the Executives of National Science and Technology”
- China Securities Regulatory Commission: “Executive Workshop for Securities Regulators”
- Bank of China Group: “Fund Management”
- Hong Kong & Macau Affairs Office of the State Council: “Executive Workshop for PRC Listed Companies”
- Hunan Securities Association: “Executive Workshop for Hunan Securities Association”
- China Railway Engineering Corporation: “Capital Market and Corporate Governance”
- Guotai Junan Securities Ltd: “Executive Workshop for Guotai Junan Securities Ltd”

#### 4. Management and Operation of Education Programmes

In general, HKSI adheres to the training process, which is adapted from Bott's (1996)<sup>3</sup>, in the development of its educational programmes:



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<sup>3</sup>Bott, Paul A., *Testing and Assessment in occupational and technical education*, Allyn & Bacon, 1996.

#### **4.1 Identifying market needs**

It is important that the educational programmes designed should meet the need and/or demand of the participants. To ensure the educational programmes are of market relevancy, several measures are taken to identify the training needs. They are:

*Market survey - The Institute undertakes market surveys for seeking comments from HKSI members and representatives of the industry to understand their training needs from time to time when needed.*

*Discussion with external organizations - The Institute maintains its close relationships with other organizations such as Securities and Futures Commission, Hong Kong Exchange and Clearing Co. Ltd., Insurance Authority, Mandatory Provident Fund Schemes Authority and other professional bodies for maximizing efforts in providing industry wide training initiatives.*

*Company visits - The Institute visits companies on an on-going basis to identify their training needs.*

#### **4.2 Development objectives**

The objective of an educational programme is the soul in its development and management process. Not only should the objectives of the educational programmes be coherent with the market need and demand, it serves as a benchmark against which the successfulness of the programme is measured. The development of such must be carefully considered and comments from practitioner and potential instructor could be valuable and collected.

#### **4.3 Developing evaluation and criteria**

Tests and examinations are critical part of the training process. There are more and more educational researchers reaching the consensus that the development of such should be early in the training process, well before instruction is completely delivered. To achieve so, the Institute has encouraged instructors to set appropriate in-class quizzes in the class to enrich training experience of the participants.

#### **4.4 Appointment of qualified instructors**

To ensure the appointment of instructors are of high standards, the Institute invites experienced market practitioners to deliver the courses. An integrated approach had been taken to ensure the quality of the instructors. For re-appointment of existing instructors, only instructors with satisfactory teaching evaluation will be re-appointed. For recruitment of new instructors, special care is exercised in assessing the candidates' academic qualification, work experience, previous teaching experience, presentation skills, and so on. Criteria for appointing instructors includes:

- i. Years of working experience
- ii. Educational qualifications
- iii. Teaching experience
- iv. Position in the firm
- v. Firm size, reputation, and so on

#### ***4.5 Developing instructional materials***

For structured certificate programmes and joint programmes, instructional materials are prepared by experienced external consultants / subject experts and then reviewed and approved by in-house qualified staff. For CPT courses, each instructor is required to submit to the Institute a set of instructional materials prior to the launch of training courses. Such instructional materials are reviewed by internal staff for adequacy, relevancy, and completeness before they are used in the class.

#### ***4.6 Implementing the teaching***

Upon commencement of a course by newly appointed instructors, the HKSI staff will carry out observation of teaching. The purpose of the observation is for the staff to assess the teaching quality of the new instructor and to provide supportive feedback to the instructors for improvement or refinement of their teaching. Regular communication briefings are held to forge better understanding and communication between HKSI and instructors.

#### ***4.7 Evaluating participant's performance***

Depending on the nature of the educational programme, appropriate assessment such as examinations is carried out to evaluate the performance of the participants.

#### ***4.8 Evaluating instructor***

Participants' evaluation by means of questionnaire is conducted for all educational programmes. The evaluation is usually conducted at the end of the programme and it deals not only with teaching quality but also with various aspects of programme quality.

A statistical report on the summary of the student evaluation questionnaire is compiled and presented together with the open-ended comments to the Institute for analysis and

discussion with individual instructor concerned. The findings are put in record for reference in case for re-appointment of individual instructors.

#### ***4.9 Reviewing educational programmes***

Course participants are encouraged to give their comments on the programme content and the programme material to the Institute through the completion of a programme evaluation form. Their comments are considered seriously by the Institute in future for possible modification and improvement of programme material and content. Nevertheless, the planning and delivery of educational programmes are under the proper monitoring of

Professional Education Committee (PEC) of the Institute. Members of PEC, which comprise of industry experts, academics, experienced trainers, lawyers, finance professionals, and so on, will review the course evaluation at each PEC meeting.

## 5. Management and Operation of Professional Examinations

Despite the long debates on whether examination is the best assessment method of an individual's standard and knowledge of a subject, examination is still perhaps the mostly widely used and accepted method of assessment in the world. Examination is a tool used to find out and estimate the efficiency of educational activities. A good examination should be reliable, valid, and relevant to candidates' studies.

### 5.1 *The roles and functions of a professional examination provider*

As a professional examination provider, HKSI has equipped itself with adequate resources and experience in offering professional examinations. As pointed out by Bott (1996)<sup>4</sup>, an appropriate professional examination provider should possess the following resources:

- *An effective Management system* – an effective system for managing the various examination and administrative arrangement
- *Adequate physical resources* – sufficient physical resources to assess candidates for the examinations
- *Qualified staff* – qualified and experienced staff to administer examination and carry out quality assurance procedure
- *Assessment method* – a valid and reliable examination system
- *Quality Assurance and Control* – an effective quality assurance system to assure examination of high quality

As a reputable professional examination provider, HKSI is responsible for and accountable on the following major functions as dictated by Bott (1996)<sup>5</sup>:

- Administer and arrange examinations such as the LE, DPE, and so on
- Apply rigorous quality assurance system / mechanism
- Liaise with international bodies such as Canadian Securities Institute, United Kingdom Securities Institute, and so on
- Select, train, coordinate, and ensure the competence of External Assessors / Reviewers
- Provide guidance and advice to candidates, External Assessors / Reviewers / Examiners
- Carry out the administration and certification of the examination
- Administer candidate registration and certification
- Promote and market the examination by organizing information seminars, placing advertisement on newspapers, and so on
- Collect and evaluate data arising from self-monitoring of examination administration process and examination results

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<sup>4</sup>Bott, Paul A., *Testing and Assessment in occupational and technical education*, Allyn & Bacon, 1996.

<sup>5</sup>Bott, Paul A., *Testing and Assessment in occupational and technical education*, Allyn & Bacon, 1996.

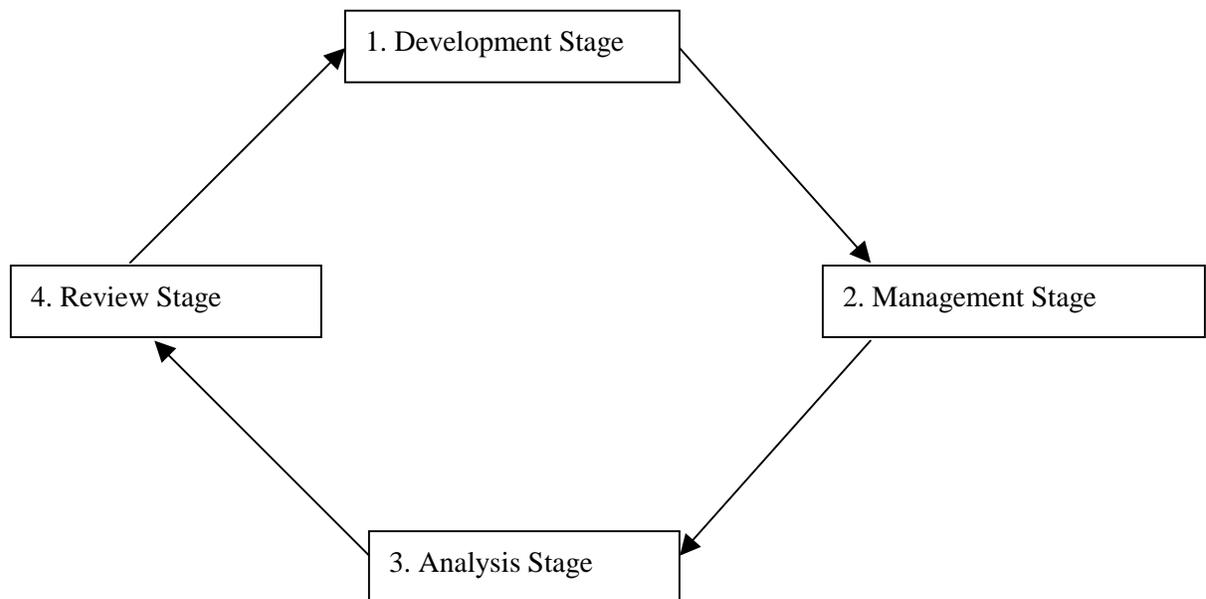
- Provide feedback and make decision for maintenance and refinement of the examination system to meet present and future needs
- Assess and recognize relevant qualification granted by other professional occupational groups
- Operate the system of credit accumulation / transfer through examination modularization
- Have a written equal opportunity policy for disabled candidates, a strategy plan for its implementation, and a means of communicating these to all relevant parties such as Examinations Committee
- Award certificate to all those candidates who are able to achieve the required standard
- Be free from overt or covert discriminatory practices and pay due regard to the special assessment requirements of individuals who may require support to undertake assessment
- Establish an examination result checking and analysis system to resolve any disputes arising out of the assessment

### **5.2 Development and Management Cycle of Professional Examinations**

To ensure a systematic development and management of professional examinations, HKSI implements the following examination development and management cycle:

1. Development Stage
2. Management Stage
3. Analysis Stage
4. Review Stage

#### **Development and Management Cycle of Professional Examinations**



### **Examination Development and Management Cycle**

	Stage	Major tasks
1.	Development Stage	<ul style="list-style-type: none"> <li>• Conduct survey on market need and demand</li> <li>• Discuss with relevant regulators and authorities for obtain recognition, if appropriate</li> <li>• Identify specific skill sets / knowledge base to be tested by the examination</li> <li>• Determine the standard of the examination (e.g. international standard)</li> <li>• Coordinate with relevant external professional consultants and subject experts on the development of the examination structure, curriculum, and examination syllabi</li> <li>• Ensure that the examination curriculum and syllabi cover the skill set / knowledge base to be tested on.</li> <li>• Arrange / draft appropriate study materials / reference textbooks for the examination</li> </ul>
2.	Management Stage	<ul style="list-style-type: none"> <li>• Conduct promotion programmes, such as information seminar, advertisement on press, and so on, for the examination</li> <li>• Set and perform quality assurance measures over the devise of examination papers</li> <li>• Periodic review and maintain the question banks</li> <li>• Arrange adequate and appropriate human resources to administer the examination</li> <li>• Draft examination policy, rules and regulation on the examination</li> <li>• Perform operational details such as preparation of examination venue, examination time-table, examination application form, examination hall ticket, examination attendance, etc.</li> </ul>
3.	Analysis Stage	<ul style="list-style-type: none"> <li>• Perform result analysis after each examination</li> <li>• Conduct analysis on the candidate profile</li> <li>• Analyze the examination paper with respect to the average correctness, number of use, cognitive level, number of learning outcome, topic, etc. of each question</li> <li>• Collect comments external assessors / reviewers</li> </ul>
	Stage	Major tasks
4.	Review Stage	<ul style="list-style-type: none"> <li>• The examination structure, curriculum, syllabi, and examination results will be reviewed on a yearly basis.</li> <li>• Regular and ad hoc review will also be conducted on the examination administration procedures.</li> <li>• Continuous revision and enhancement will be placed on the examination for improvement.</li> </ul>

### **5.3 Criteria of a successful examination system**

To assure a quality examination system, clear standards should be set for performance against which candidates will be assessed. Such standard should be communicated to the candidates and candidates are encouraged to become self-monitoring learners in the meta-cognitive mode. HKSI has adhered to Cotton's (1995)<sup>6</sup> checklist for a quality assessment system:

- Curriculum fidelity - this implies that the construct, domain, or curriculum should be well specified and there should be a broad coverage of the curriculum in the assessment
- Comparability - this is achieved through consistency of approach to the assessment; a common understanding of assessment criteria and that performance is evaluated fairly. These can be achieved by a rigorous moderation and quality assurance system
- Public credibility – this can be achieved through gaining recognition from other international institutions and industry experts such as United Kingdom Securities Institute, Canadian Securities Institute, and so on
- Transferability - this requires that detailed information about context be available so that we may take informed judgments about transferability
- Equity – all candidates should be treated fairly

### **5.4 Professional Examinations as a Competency-based assessment**

Considering most of the professional examinations offered by HKSI are competency-based assessment in nature, the qualification / award issued by HKSI should:

- Be based on international standard required for performance in employment
- Relate to future needs with regards to technology, market and employment patterns
- Be based on learning by any modes, such as self-studying, attending training courses, and so on
- Be based on learning with no set time scale
- Be based on learning in any location
- Have valid and reliable examinations ensuring that the international standard can be achieved at work

### **5.5 Criterion Referenced Testing Approach**

Professional examinations offered by the Institute are developed in accordance to the Criterion Reference Testing Approach. Under this approach, examination questions are developed with respect to certain criteria such as cognitive level, number of outcomes, topics, and so on. To ensure consistence across examination papers in various sittings, each paper is prepared in compliance with pre-determined weighting of each criterion.

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<sup>6</sup>Cotton, Julie, *The Theory of Assessment*, Kogan Page, 1995

## **5.6 Quality Assurance at HKSI**

Quality assurance is essential and important to ensure the quality of an examination. Internally, HKSI has qualified staff as well as proper policy and procedures to ensure proper examination administration procedures and delivery of examination. Externally, HKSI has appointed qualified External Assessors / Reviewers and Examinations Committee members, which are comprised of industry experts, academics, lawyers, and so on, to give comments on both the examination system and the examination papers. According to Cotton (1995)<sup>7</sup>, the work of the External Assessors / Reviewers and/or members of the Examinations Committee should include the following:

- To judge impartially
- To analyze and compare candidates' performance
- To approve the form and content of examinations
- To agree changes in assessment procedures
- To attend assessors' / reviewers' / committee's meeting
- To overview marks given by markers
- To ensure that the processes follow the examination regulations
- To comment on the effectiveness of the examination system
- To provide advisory to the Institute
- To interpret the Institute's guidelines, rules, regulations, and guidance
- To inspect a representative sample of examination papers
- To check if the international standards are met
- To check of the examination is valid and relevant
- To resolve disputes on examination equitably
- To recommend for improvements to the examination practices

It is believed that the existence of such quality assurance system does not only greatly enhance the creditworthiness of the examination system, it also provides a check and balance on the management of examinations.

## **6. Conclusion**

This paper bridges the gap between theories and practice on the management and operation of educational programme and examination. As a professional institution in the provision of educational programmes and examination, HKSI shares its management and operational details in the offering of quality educational programmes and examinations.

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<sup>7</sup>Cotton, Julie, *The Theory of Assessment*, Kogan Page, 1995

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# Benchmarks for Alternative Investments

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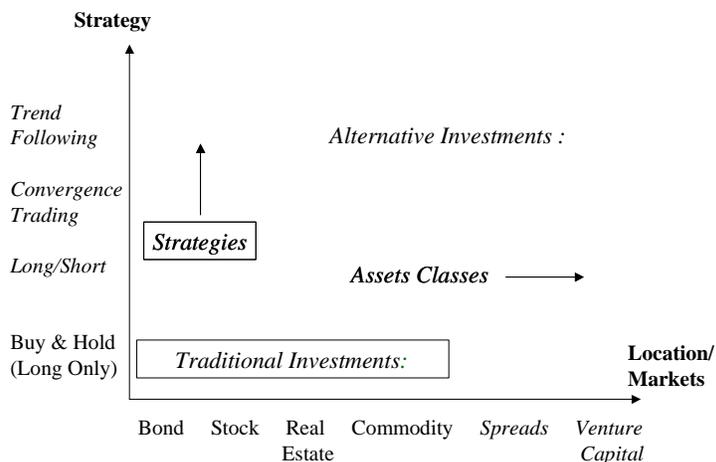
*This is the proceedings of a presentation delivered by William Fung to the 15<sup>th</sup> SAAJ-AIMR/JSIP Joint Seminar “Asset Management and Benchmarks”, March 5-7, 2003, Tokyo. The content of the presentation represents co-study by William Fung and David A. Hsieh. The Security Analysts Association of Japan has obtained permission from William Fung and David A. Hsieh to reprint it in *the* ASAF E-Journal.*

## Introduction

This particular session is mainly on hedge funds, or more precisely, hedge fund strategies. Within the context of the seminar, let me begin by placing hedge funds within a broader context of other asset categories.

Typically, when we think of traditional investments, we think of asset classes --- familiar ones are bonds, stocks, real estate, and commodities. Often, real estate and commodities are placed into the alternative category. But these investments have been around so long, I prefer to leave them in the “conventional” category. As **Exhibit 1** illustrates, moving along the horizontal axis, the first addition I made beyond the traditional asset classes are— “spread”. At the very end of non-traditional investment classes, we have venture capital. There is a reason why I ordered them in this way.

## Exhibit 1 — Investment Landscape



The logic is as follows. With traditional investments, we frequently assume that the strategy used is one of buy- and-hold and long only. By making that assumption, one is simply saying that only where those assets transact determines all the risk return characteristics. Whereas with hedge funds strategies it is not where these assets transact, it is how the risk is being managed that matters. In other words, hedge funds may hold a portfolio of conventional stocks and bonds, how hedge fund managers generate return and risk characteristics different from the underlying holdings is a function of how the underlying securities are managed. Put differently, hedge fund returns differs from conventional assets not because they invest in different assets but because of the way the underlying investments are managed.

This is a very important distinction—conventional asset classes are different from each other in terms of physical attributes--stocks versus bonds for example. What make hedge fund returns different are the differences between hedge fund strategies and the buy-and-hold strategy assumed in generating conventional asset class returns.

As shown in **Exhibit 1**, along the horizontal axis, the only substantive difference in terms of assets used by hedge funds from conventional asset categories is the emphasis on “spreads” or long/short combinations of conventional assets. In contrasts, there is a much more significant difference between hedge fund strategies and conventional asset management strategies as the vertical axis depicts.

In general, hedge fund strategies are long-short combinations of traditional assets. It is the management of these long-short positions, together with leverage, that generate interesting alternative risk-return characteristics.

The rest of the talk will be focused on “What are these strategies?”, “How is it done?”, and “How do we go about measuring it?”

My talk has three parts. The first part deals with the difficulties in measuring hedge fund return characteristics, and the second part deals with the different ways to simplify the wide range of hedge fund strategies to something more manageable. The third is a combination of the first two topics, where I analyze the different ways of creating benchmarks for hedge funds. The first and second part of my talk consists of extracts from two papers that David Hsieh and I have published in the *Financial Analysts Journal*. The third part is an extension of these earlier works.

## Problems with Database Biases

If an investor wants to know something about alternative investments, the first difficulty that he or she comes across is “how are these returns generated?”

To answer this question, we begin by learning from past performance. Here we come across the first difficulty in analyzing hedge funds—namely data limitations. Over the decades of investment experience with traditional assets, we are spoiled with twenty, fifty and sometimes even a hundred years of data, spanning a broad range of economic cycles.

In contrast, the hedge fund industry is still in its infancy compared to traditional investments. In addition, it has stayed pretty much unregulated to now. Therefore, data and information are not easy to obtain. When you do get them, they frequently come in non-standardized formats, which make comparison and analysis using conventional statistical tools very difficult. Let me begin by discussing these data difficulties researchers face.

Before going into analyzing the specifics of hedge fund performance, it is helpful to state the goals of such an exercise. One of the outputs of performance analysis is to help us construct effective investment benchmarks to judge past performance on a risk-adjusted basis or to compute risk-adjusted alphas. I will try to persuade you that not all “alternative alphas” are born equal, or that they can differ greatly in terms of risks. That is one concept I want to stress. Moreover, I would like to highlight the differences between alternative strategies in order to identify these risk differences. This is essential if we are to determine how hedge fund strategies fit into an overall asset allocation framework. Beyond identifying these risk differences, we also need to form reasonable expectations about future return and risk in order to manage investments going forward. To achieve this, we need to develop efficient benchmarks in a coherent, consistent framework for doing all three.

I begin with looking at past performance. Analyzing the hedge fund industry reminds me of trying to observe an eclipse-- you are never allowed to see the entire picture--there is always something missing. The industry has grown in the past from a very small size to approximately 6,000 funds and hundreds of billions of dollars under management. The more funds there are, the more we should be concerned about the size of that portion of the industry that we cannot see in judging the past.

Just how big is this problem? Look at existing databases of hedge funds. Typically, these databases have three main sources of biases inherent in their data. These are: “selection bias”, or missing data or funds; “survivorship bias;” and the third “instant history bias”.

## Selection Bias

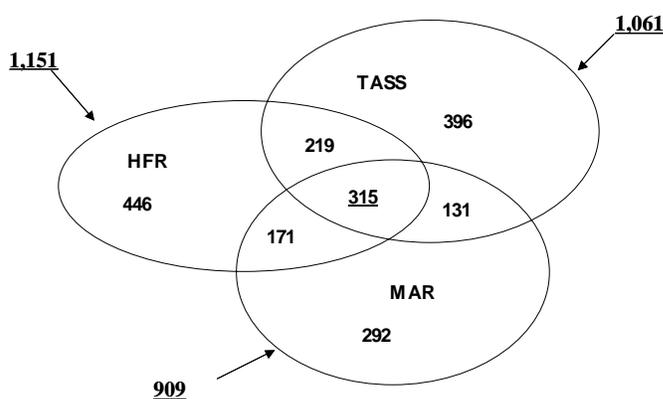
Let me begin with selection bias. No database vendor has ever been able to capture all hedge funds ever existed at any point in time. That is just a consequence of an unregulated industry where hedge fund managers can choose to report to one database vendor but not to another. In fact, there is no obligation to report to database vendors at all. On the data

collection side, different database vendors have different criteria for including a fund in their database. Given this, how different is one database from another? At the research center of London Business School, we have been trying to develop statistics that will help us determine the magnitude of these biases. Here are some of our findings, at the end of 2000, combining different commercially available databases together allows us to see the following picture:

First, you begin with a commonly-known database like Hedge Fund Research (HFR). Next, we added another well-known database like TASS. Finally, add an equally well-known database like MAR/Hedge.

As shown in **Exhibit 2**, at the end of 2000, HFR had approximately 1,151 funds in their database, TASS had 1,061 funds, and MAR had about 909 funds. Superficially, it is tempting to conclude that “they are not very different”. But if you look closely at the data, you find that of the three databases, there are only have 315 funds in common. In other words, if you ask the question “What does the universe of hedge funds look like at the end of the millennium?” you may get very different answers depending on whom you ask. That is a little disturbing. For some reason, different database vendors managed to uncover a sizeable number of hedge fund managers that the other database vendor did not have. What I find amazing is that despite having only 315 funds common to all three, their respective indices of the industry are highly correlated!

### Exhibit 2. December 2000: 1,970 Live Funds



## Survivorship Bias

If you cannot see all the funds that are in business, then by implication, you are hardly likely to be able to see all the funds that died or went out of business. These missing funds

are the primary cause of survivorship bias. Over time, funds come into the industry, and they go out of industry. Some funds survive, and others will not. It will be logical to expect that performance characteristics of those that went out of business to be inferior to those that managed to stay in business—or that there is a survivorship bias in their performance statistics.

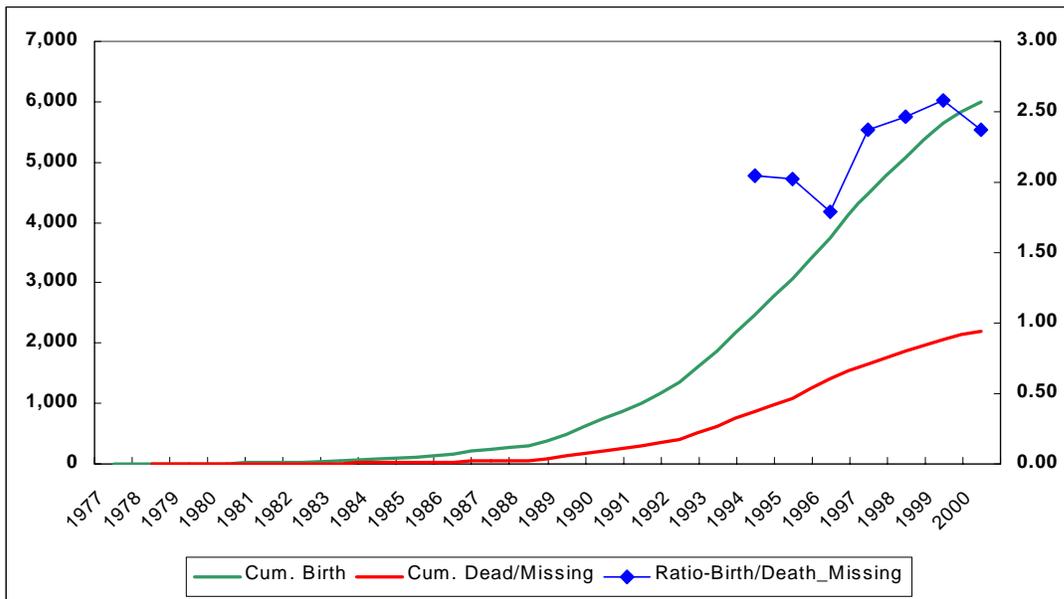
However, there is another aspect to survivorship bias among hedge funds. This comes from managers who simply chose not to report to database vendors. Hedge funds tend to have finite capacity. When successful managers raised enough capital, they are no longer interested in disclosing their performance statistics—they will simply stop reporting. If successful managers are also among the missing funds in a database, this “missing funds bias” cannot be easily determined—in that it can run in opposite directions.

Clearly, funds that went out of business will bias your performance statistics upwards, in the sense that all those funds that died with poor performance are missing. Against this, successful managers with good performance characteristics may also be missing as they stopped reporting to databases. In the end, we have these two offsetting forces affecting historical returns making it hard for us to form definitive conclusions.

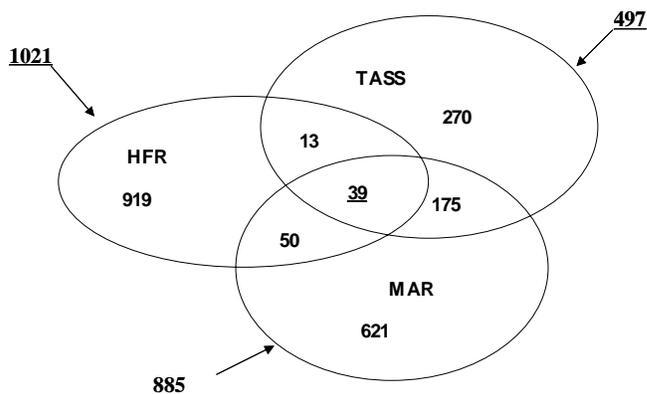
“How big a problem is this?” At the end of December 2000, there are all together 2,087 missing or dead funds. At the LBS Research Center, we purchased all the dead fund information from these major database vendors. Arranging the results in the same format as before, as illustrated in **Exhibit 3**, we see that HFR have 1,021 funds in their missing fund database. With TASS, there are 497. With MAR/Hedge, there are 885. The dead/missing funds that are common to all three databases only come to 39. With this, one arrives at the same uncomfortable conclusion. That is: no matter what type of hedge fund data you are interested in, dead or alive, you may get very different answers depending on whom you ask.

Not only does this problem exist with past data, we don't see the problem going away in a hurry. Consider this—if we track all the hedge funds that came into existence since 1977 (all those that we were able to collect) one arrives at this diagram as shown in **Exhibit 4**. From 1977 to the end of 2000, approximately 6,000+ funds entered the hedge fund industry.

Of that, 2,087, as I pointed out, died or went missing. Each year, the ratio of new funds created to funds exiting known databases has been remarkably stable. It varied between 1.75 to 2.50 in favor of new funds. That tells us that the missing fund problem is not likely to go away anytime soon.



**Exhibit 3. December 2000: 2,087 Missing/Dead Funds (since 1987)**



What are the practical implications? It turns out that these biases can impact pro forma returns of given samples of hedge funds. Omitting the impact of “dead funds,” from pro forma returns is similar to simulating historical performance free of investment errors. This is clearly unrealistic.

How big is survivorship bias? The range of estimates from existing research falls within the range of 0% to 3%. In other words, if you had measured the performance using only live available funds, you can be making errors of up to 3% per annum in performance. However, since we can never see the entire universe of hedge funds, this range remains an estimate. That said, I would take some of the work that concluded a zero percent bias with caution.

# Instant History Bias

## Exhibit 4. Hedge Funds Entry/Exit Trend: 1977 to 2000

Next I come to “Instant History” bias. “Instant History” bias is something peculiar to hedge funds. In the hedge fund industry, it is quite often that new funds get started with friends’ and relatives’ money as well as the manager’s own capital. Over the initial trading period (or an incubation period) success will lead them to grow by raising more capital. Failures will simply disappear unnoticed. Therefore, by the time we see a new hedge fund appearing in any database, almost by definition, the incubation experiment has succeeded. Typically, when a fund gets started, the fund manager works much harder running a small business. Quite often, there is a tendency to see better performance in the first 12 months of a fund’s operation. Generally when they grow bigger, with few exceptions, performance tends to decline. Database vendors generally do not distinguish performance during the incubation period from the subsequent periods. This is known as the “Instant History” bias, which affects estimates of historical mean returns. We estimated this number in one of our earlier papers in the *Journal of Financial and Quantitative Analysis*, to be approximately 1.4% per annum (too high) on average.

What can be done to mitigate some of those problems? For instance, we can consider the question “Are these measurement errors diversifiable?” Generally, if a fund is missing, no matter how big a sample you use from “live funds,” it will remain missing. Bear in mind that the survivorship bias figures I mentioned earlier are derived from using “entire” databases, it is unlikely that most simulated portfolios are sampled from larger universes. Until the true universe of hedge funds, past and present, can be observed, there is no way to determine whether broadening a sample of hedge funds necessarily reduces measurement errors.

*Source: HFR, TASS, MAR and others*

## Other Problems: Peer-Group Averages

Another tricky problem arises in the construction of hedge fund portfolios. Take for example, an equally weighted portfolio of hedge funds. Over time, an investor of an equally weighted portfolio is actually following a contrarian strategy.

How does that happen? Every time a fund does better than its peer (a winning fund relative to its peer), in order to maintain equal-weighting, you will have to reduce exposure to the winner and increase the exposure on the losing funds (relative losers) to restore equal weighting among all funds in the portfolio. I do not know of too many portfolio managers who are very comfortable selling winners and buying losers in a consistent manner. It is possible that this strategy suits certain specific investment mandates but one should be aware that a seemingly passive, simple weighting scheme implies an active contrarian portfolio strategy.

Another popular passive portfolio strategy is the standard value-weighted method. Value-weighted method can be problematic with hedge fund portfolios. It effectively assumes a buy-and-hold strategy where “the rich gets richer.” The better performing funds have a tendency to increase in their portfolio weighting reducing diversification. Unfortunately, the hedge fund industry is a finite capacity industry. So, ultimately you will run out of capacity with the good performing funds. Value weighting is a popular method among conventional asset indices but is naturally unsuitable for the hedge fund industry.

Another problem with peer-group averages is that it is frequently based on qualitative information from the hedge fund managers themselves. Because there is no standardization in the hedge fund industry what one database vendor means by a particular description could be very different from what another database vendor despite (almost) identical sounding strategies. For example, in what is described by the CSFB/Tremont family of indices as “Equity Market Neutral Funds”, there are 27 funds in that category at the first quarter of 2001. Out of these 27--18 are in Hedge Fund Research’s database. According to HFR, these very same funds were classified into different groups. (6 in Equity Market Neutral, 7 in Statistical Arbitrage, 3 in Equity Hedge, 2 in Other Sub-indices). It is hard to tell if different database vendors describing these funds by similar “words” actually result in funds with similar risk and return characteristics. How then do investors extract “forward looking” risk-return characteristics based on qualitative descriptions of funds? One needs to go a step further, and ask the question: “What are the risk and return characteristics behind these words? What makes a fund market-neutral?”

## **Style Categorization**

With all these caveats regarding the interpretation of past hedge fund performance, what can we learn from historical data?

### **Funds of Hedge Funds Performance**

If you are interested in the past performance of hedge funds, why not look at the actual experience of hedge fund investors. That--translates to looking at the funds of hedge funds. These are actual portfolios of hedge funds. Their returns are usually audited, compiled by independent administrators, and if any investment a fund of fund made ended poorly (say the underlying fund went out of business) the impact remains in their track record. In other words, you cannot erase it from the past returns like simulated pro forma returns out of a database. In addition, we do not have to make artificial assumption on the portfolio’s weighting scheme like equal weighting or value weighting. The historical pattern of asset allocation is kept in the track record of funds of hedge funds.

A negative for using funds-of-hedge funds to assess past performance is the lack of transparency. Rarely are the historical portfolio compositions of funds-of-hedge funds kept (or for that matter, disclosed). A positive for using funds-of-hedge funds is that they are investable. Something to be careful about using data from funds-of-hedge funds is the extra layer of fees over and above the underlying hedge funds.

Although an index of funds-of-hedge funds is helpful in giving us almost bias-free historical performance characteristics of a typical portfolio of hedge funds, more work is needed to explicitly identify the current asset allocation of such a portfolio. This is so because asset allocation decisions of funds-of-hedge funds do change over time. To explore this question we need to draw from some of the research on estimating the aggregate risk characteristics of the hedge fund industry and how they evolved over time.

This takes me to the second part of the talk – Return-Based Style Models.

## Return-Based Style Factors

Qualitative style categorization of a hedge fund’s strategy typically depends on the fund manager’s self-descriptions of what the strategy does. Like historical hedge fund performance, there is no standard format in which the information is reported. At best, this source of information is too imprecise and open to interpretation and at it’s worst, it can be confusing and unreliable. An alternative to relying on what managers tell us what they do, why not look at the actual return patterns to see what managers actually do.

It turns out that we can achieve this by running statistical analyses on historical performance using techniques such as cluster analysis or principal component analysis to group funds with similar return characteristics together. We call these groupings of funds “return-based style factors”. In our first paper in 1997, David Hsieh and I did this analysis and found five major principal components, or return-based style factors. More recently, Steve Brown (NYU) and Will Goetzmann (Yale) extended our work and found up to eight return-based style factors. Whether there are five or eight return-based style factors is unimportant. What is important is that these results tell us that the problem of having so many different qualitative style groups can be reduced by way of actual performance characteristics from funds.

How does this help us in making decisions? Where it helps us is to reduce the dimensions of the manager-selection to more manageable proportions. It also helps us to reduce the missing funds data problems. This is so because if return characteristics are being grouped into homogeneous groups, there is a good chance that the missing funds will have return characteristics that can be capture by these return-based style factors.

Where return-based factor analysis cannot help us are in the following areas:

1. Some database biases still remain when it comes to measuring average returns.
2. Return-based style factors do not give us any further insight into the strategies other than the fact that groups of funds perform like each other statistically. But no further clue is provided as to how and why.
3. These return-based style factors may not be stable over time and can be sample-dependent.
4. Return-based style factors are mathematical constructs that are not investable. There is no unique qualitative interpretation of the factors.
5. Finally, it is hard to deal with the multi-strategy funds within a return-based style factor framework.

These are difficult problems to resolve. Over the last four years, David Hsieh and I have tried to find an alternative to return-based style factors that are less vulnerable to these problems.

### **Asset-Based Style Factors**

We came up with an idea that in order to solve all these problems, we need another way of measuring hedge fund risk beyond just looking at past hedge fund returns. It turns out that the most direct approach is to explicitly model hedge fund strategies using a rule-based model and observable market prices. We call these Asset-Based Style Factors (ABS factors for short). The first model we build was an option-based replication of trend-following strategies (Fung and Hsieh, *Review of Financial Studies*, 2001). Since then Mitchell and Pulvino (respectively of Harvard and Northwestern) have created a similar factor for merger arbitrage strategies (Mitchell and Pulvino, *Journal of Finance*, 2002). We have also created models that mimic the return characteristics of fixed income arbitrage (Fung and Hsieh, *Journal of Fixed Income*, 2002) and we are now finishing some work mimicking the equity long-short strategies extending some of the work of (Agarwal and Naik, *Review of Financial Studies*, forthcoming). A summary of ABS factors can be found in our article in the *Financial Analysts Journal*, 2002.

How do ABS factors work? From return-based style factors we can identify groups of hedge funds with similar return characteristics. The question is how to interpret these groups and how do we know if they are stable over time? ABS factors are rule-based models of hedge fund strategies. They are easy to interpret since they are constructed with a specific strategy in mind. ABS factors are computed based on market prices. Therefore, we can now compare the return series of ABS factors to the return-based style factors without risk of over fitting the data. Whenever a return-based style factor's return matches with that of an ABS factor (or a linear combination of ABS factors), we now have an explicit identification of that group of hedge funds belonging to the return-based style factors. In other words, we have associated the return behavior of a group of hedge funds with that of a pre-determined rule-based model.

How would these things help us? These “asset based style-factors” have very interesting characteristics. They are bias-free because only market prices are used in the modeling process. We do not use hedge fund returns in constructing ABS factor returns.

They are transparent because the models are rule-based. It translates hedge fund risk into a conventional setting. In other words, we can take hedge fund risk, and directly relate it to stocks, bonds, and interest rates—conventional asset classes that you are familiar with. Through this process it is bringing hedge fund risk factors much closer to conventional risk factors.

In terms of performance evaluation, with ABS factors, we are now able to answer the following questions. Let us suppose that hedge fund returns are not risk-free. Few, if any of us, are willing to believe that alternative alpha is risk-free. What then are the risks inside these alternative alphas? The answer to this question tells us about the systematic risk factors inherent in the hedge fund strategies. Put differently, it tells us about hedge-fund betas.

In terms of risk management, through these ABS factors, we can relate hedge fund risks to conventional assets. Because of this association, we can infer from the performance of the ABS factors (which has data going back much further in history spanning many more economic cycles) and will no longer be constrained by the short history of the hedge fund industry itself.

Finally, in terms of measuring the expected risk and return, we can now directly relate the assessment of risk and return on hedge funds in a consistent framework with our opinions on traditional stocks, bonds and interest rates.

That-- is a lot of new ideas to digest. But I have to ask for your patience to go over one more slide on the limitations of ABS factors before showing examples of how ABS factors work. Like every theory, ABS factors have limitations. So far, we have only been able to identify ABS factors for a broad-based category of strategies. We cannot, at this point, model very specific strategies. That's one big limitation.

More work needs to be done but it will take time. Right now, there are researchers working on creating ABS factors for convertible arbitrage. I am looking forward to seeing outputs, because it will help us achieve the following.

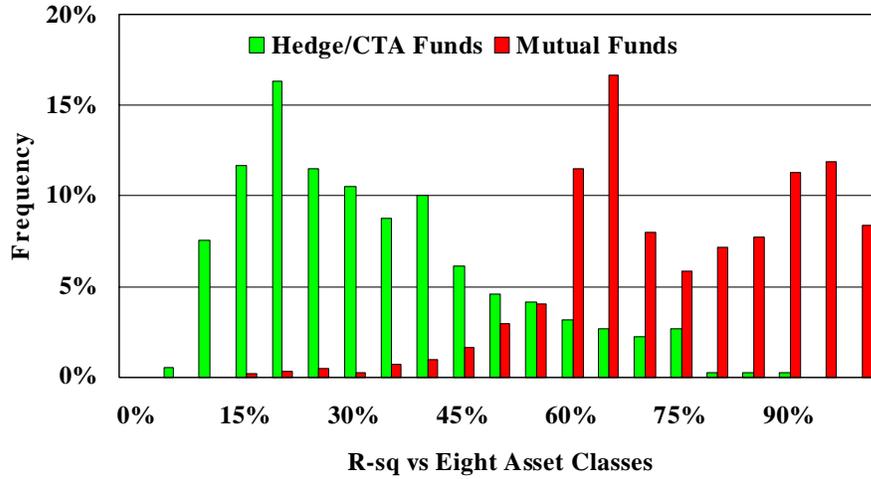
## **Benchmarks for Hedge Funds**

Recall from earlier discussions that, if you use traditional asset categories, stocks, bonds, emerging markets, currencies, gold---these are standard indices; assuming a long-only and buy-and-hold strategy--to explain the hedge fund returns, you won't do well. You will have very low R-squares, very low explanatory power. Unlike mutual funds, which are typically buy-and-hold strategies, the hedge fund return is distributed toward the zero-R-squared side to the left of the graph as shown in **Exhibit 5**.

Whereas applying the same standard indices to mutual funds, you will have the explanatory powers in the order of 70 to 90%. That is not terribly surprising, because mutual funds naturally buy and hold those types of assets.

**Exhibit 5. R<sup>2</sup> to Standard Benchmarks: Fung and Hsieh, RFS, 1997**

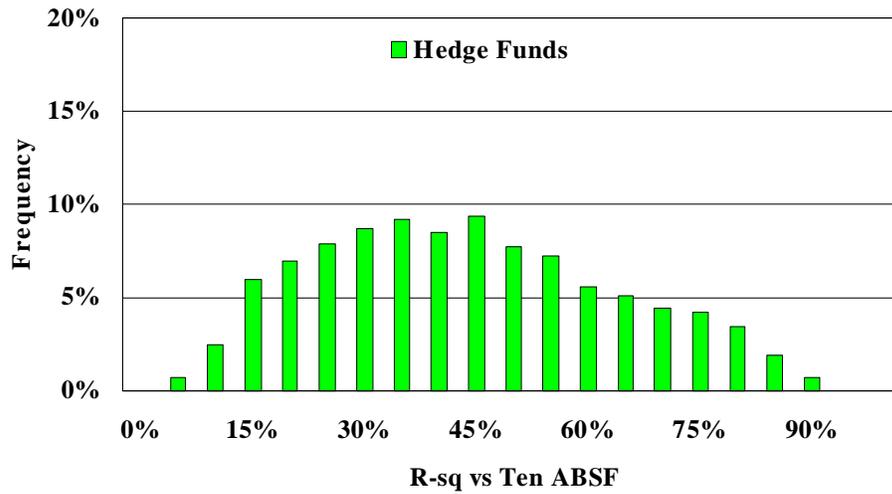
8 Asset Classes: US Eq, Non-US Eq, US Bd, Non-US Bd, Emerging Mkt Eq, Euro\$, Gold, FX



Cross-Sectional Differences of Hedge Fund Strategies

**Exhibit 6. R<sup>2</sup> to Asset-Based Factors: Fung and Hsieh, 2001**

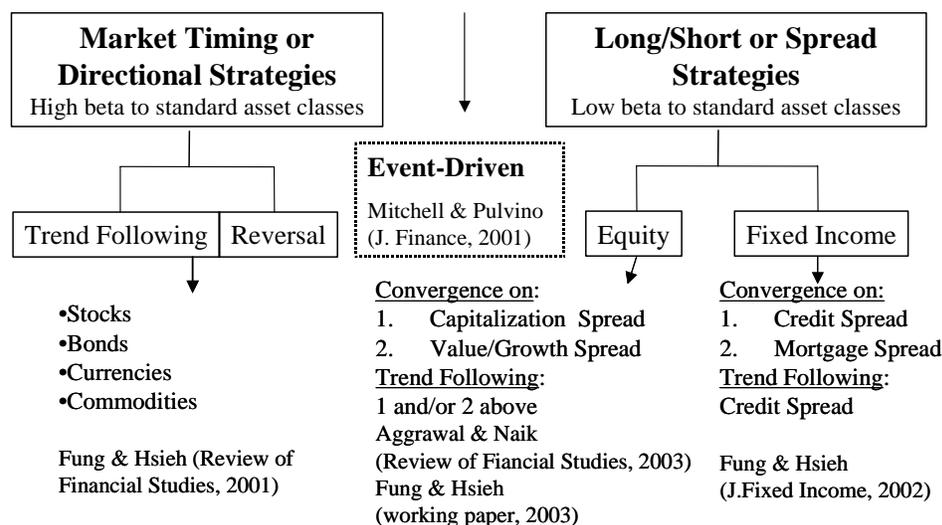
10 ABSFs: S&P, SC-LC, V-G, IFC, HY-Tsy, Cvt-Tsy, Mbs-Tsy, LB on Bd, LB on FX, LB on Commodity



If we replace these conventional asset-class indices by ABS factors in the regression model, we can get it up to 40 to 50% R-squared as shown in Exhibit 6. I think that is pretty close to the limit in terms of explanatory power for most models because hedge fund strategies are dynamic cannot be easily capture by a stationary linear model like this. The details of those factors can be found in our second Financial Analyst Journal paper in 2002. There is also a reference section at the end of this presentation.

**Exhibit 7** shows how these ABS factors fit into a single, unifying scheme of hedge-fund strategies. Soon after the Long-Term Capital disaster, the Bank for International Settlement, concerned about the impact on the banking system, produced a position paper attempting to categorize different hedge fund strategies into a single simplified framework. We extended that framework, to arrive at the following.

**Exhibit 7. What we know about ABS Factors  
BIS 1999, and Fung & Hsieh 2001 (NBER, Seminar)**



In the original BIS framework, they simply have market-timing or directional strategies in one category, and the long-short or spread strategies in other category. They actually called “macro-trading” for directional, and “relative value” for the non-directional strategies. By “directional” they mean very high beta to the standard asset classes, by “relative value strategies” they mean low beta to standard asset classes. What’s missing is, of course, the group of event-driven strategies. The challenge is to take this picture and create a single, unifying framework of risk factors that captures the characteristics all the hedge fund strategies?

Well, this is what we have got. For directional strategies--it really has two major components, trend following and reversals. In general, market-timing strategies are primarily momentum-driven (trend following) or contrarian-driven (reversal).

In terms of long-short or spread strategies, we can break it down into stocks and bonds to keep it in line with conventional asset classifications. In the equity area, hedge fund strategies can be categorized into either following a “convergence” type of approach to trading capitalization spread (small cap vs. large cap), or value-growth spread (long value short growth stocks, or vice versa). As convergence strategies are primarily following a contrarian approach, the flip side to this will be a momentum approach to trading these spread variables (either capitalization and/or value-growth). References can be found at the end of the presentation.

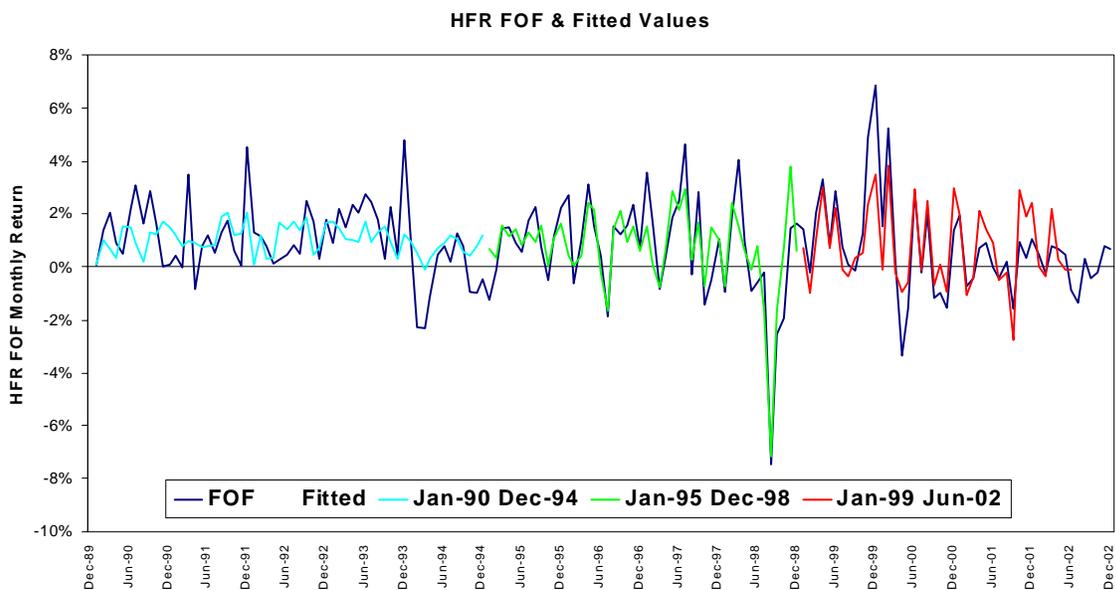
In fixed-income area, we see a similar picture. You are either following a convergence strategy on fixed-income related spreads variables (e.g. credit spread or mortgage spread), or you are following a momentum-driven approach to trading credit. You can find the details of this analysis in a paper I published with David in Journal of Fixed Income (2002).

Here we have a simplified picture of nearly all hedge fund strategies with their attendant ABS factors. It perhaps will not surprise you that index producers are beginning to follow a similar structure to this for index construction.

### Dynamic Behavior of Hedge Fund Investing

All of the above deals with the cross-sectional differences of hedge fund strategies. The question remains, can ABS factors capture the dynamic behavior of hedge fund investing over time? Put differently, can ABS factors tell us, “What are the major bets that large hedge fund portfolios have placed over the years?”

**Exhibit 8. HFR Fund-of-Funds Index Returns (1990-June, 2002)**



It turns out that using just four ABS factors--stocks (using S&P500), bonds (using constant maturity 10 years Treasury yield), and two spread variables equity capitalization spreads (here we used the Wilshire Small Cap minus Large Cap) and credit spread (Moody's BAA minus 10 year constant maturity Treasury) can do a reasonable job in explaining fund-of-hedge funds return over time (all of these variables are publicly available).

**Exhibit 8** is the output of such a model--using the performance of fund-of-hedge funds index to proxy large hedge fund portfolios (the dark blue line is the monthly return series of fund-of-funds index from HFR) we see the prediction of the four-factor model (the light blue line is the prediction of the four-factor model from 90-94 ) over different time periods. And you can see, during the earlier period where there are relatively few funds-of-hedge funds and the model is still in learning mode, the predictions are not very good. When we get to the second period 1995 to 1998 (in the green line) you can see that the model has picked up most of the monthly return variations of the fund-of-hedge funds index.

There was a regime change in the last period, 1998-2002 and in that final period, the predictions continued to track closely (red line). More specifically, bets on narrowing credit spread by funds-of-hedge funds dropped dramatically (by over ten-fold) soon after the LTCM crisis. The R-squared of the fit between forecast and actual in the second and final periods stayed mostly in the 0.6 to 0.7 range. It is surprising that only a few systematic risk factors can explain this much

**Exhibit 9** shows more recent predictions. This is the four-factor model based on the last update through June 2002. There is, and I am happily to report, an alpha term. Hedge funds do add value beyond systematic risk – it is approximately 60 basis points per month. The ABS beta --- stocks, equity spread, 10-year treasury for bonds, and credit spread --- are these four numbers.

**Exhibit 9. Out of Sample Forecast: July 2002 to December 2002**

	Four-Factor Model {last update=6/2002}						
Alpha	0.60%					HFR	
Beta	0.23	0.24	-0.71	-0.62		Composite	
	S&P500	SC-LC	10-yr UST	Credit Spd	Forecast	Actual	Error
July	-7.80%	-6.19%	-0.35%	0.12%	-2.55%	-2.86%	0.31%
August	0.66%	-0.24%	-0.37%	0.07%	0.91%	0.53%	0.38%
September	-10.87%	2.50%	-0.51%	0.44%	-1.26%	-1.58%	0.32%
October	8.80%	-4.51%	0.30%	0.06%	1.32%	0.57%	0.75%
November	5.89%	3.14%	0.29%	-0.44%	2.80%	2.06%	0.74%
December	-5.88%	0.40%	-0.39%	0.10%	-0.47%	0.17%	-0.64%

Now against the 10-year yield, the number or beta is negative telling us that hedge funds tend to make money when yields go down or when the bond markets are behaving better. Similarly, when the credit spread narrows. It also tells us that hedge funds tends to perform better in markets with better economic conditions ---- falling interest rates, compressing or narrowing credit spread, and rising stock market. Less well, but not necessarily lose money, during bad economic conditions. There also appears to be a market timing components to this.

This simple four-factor model only uses static variables. It is done this way for simplicity. In general, we have found that adding dynamic, trend following variables can improve the explanatory power of the model (as we found in the ABS factor work we did on fixed-income strategies). In addition, the model is time varying, in the sense that you do need to update regularly.

The column of “Forecast” and “HFR Composite Actual” shows you the forecast of our model, and as an indicator of how the average of industry is doing—using the FoF index as the proxy for the hedge fund industry. Comparing the model’s forecasts to the returns of HFR composite index of all hedge funds we can see the forecast errors of the model. The errors are not big --- in the region of 20 – 30 basis points per month with the occasional outlier (but bear in mind that this is a static example, in actual application, we would update the model monthly). The big advantage here is that we can update the prediction daily using market prices and have an estimate of how well the hedge fund industry is doing intra-month.

### **Organizing Hedge Fund Strategies by Risk Factors**

What we have just looked at is how a simple four-factor risk-based approach can capture the general risk characteristics of large hedge fund portfolio’s performance. The next logical step is to construct benchmarks along the lines of risk factors. In other words, we can imagine organizing the myriad of hedge fund strategies by ABS factors—which are based on directly observable market prices. We call this risk-based approach to benchmarking hedge funds.

How does a risk-based approach compare to existing hedge fund benchmarks? In a risk-based framework, we can describe the HFR index or HFR family of indices as having its focus on pure coverage--having as large a database as possible. The implicit assumption here is that when the database approaches the complete universe of hedge funds, all risk characteristics will be included.

The way HFR communicate risk differences of various funds is by a qualitative style description. With a focus on database size, there isn’t much due-diligence done to funds that are included in the database—and perhaps intentionally so. The price one pays for such an approach is the cost in processing the vast amount of data and the array of measurement errors that I mentioned at the beginning of the seminar. Of course, it would be impractical to invest in a large index like the HFR composite.

In terms of Credit Suisse/Tremont index, their focus is to be investable hence their smaller database. And in terms of strategies, it is dependent on qualitative styles according to managers' descriptions and the index supplier's judgment. The way they include managers into their database is a little more selective than HFR, and because it is a smaller index, they can afford to be more selective. However, to go from several thousand funds (in the case of the HFR database) to less than a hundred funds (in the case of the CSFB/Tremont) one would need a comprehensive analysis of how this reduction process is achieved. It is unclear to me precisely how this is done.

Next, the more interesting index product that were introduced lately. The S&P HF index also focuses on investability but their approach has a distinctive risk dimension to it. In order to reduce the unobservable hedge fund universe into a manageable, investable size, they employed a stratified sample technique. This method is similar to what I described earlier as "return-based style" factors. Like all other statistical methods, there are strength and weakness to the approach (some of which have been covered earlier in this presentation).

The key point here is the careful reference to the risk dimension of hedge fund strategies in the index construction method. The main strength of the S&P approach is the extensive, careful due-diligence on each manager in the index. Because of the managed account structure of their investable index, continuing due diligence and index rebalancing should benefit from the greater transparency from the underlying hedge fund managers.

In terms of Morgan Stanley Capital International (MSCI), they too have added risk dimensions to the way their index construction method. They too have grouped and sorted hedge funds by the conventional asset classes each manager invests. The emphasis on creating a platform where customized indices can be easily constructed makes their approach in many ways similar to the ABS factors I described. Without the constraint of investability, the MSCI indices are based on a broader database of hedge funds. But against that, the sheer size of data also limits the level of detail the due diligence process on each manager in the database when compared to the S&P hedge fund index.

So, there is a gradual convergence of approaches in the market place for developing hedge fund benchmarks, and it is becoming more and more risk oriented with clear emphasis on being practical and investable.

In terms of portfolio construction, our model suggests that the way we should look at hedge fund returns is to adjust expected hedge fund returns for the appropriate systematic risk exposure to ABS factors. The HFR index is simply not designed to do that, and neither is the CSFB/Tremont index. The S&P Index, on the other hand, is much more closer to using this type of framework. The MSCI hedge fund index is even closer to a completely risk-based approach because of their focus on flexibility and customized indices designed along the risk dimension.