



**Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999**

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TABLE OF CONTENTS

1. INTRODUCTION.....	4
1.1 MARKET FOR OTC DERIVATIVE PROCESSING SERVICES	4
1.2 BACKGROUND TO THIS STUDY	4
2. MANAGEMENT SUMMARY	6
2.1 HIGHLIGHTS OF FINDINGS	6
2.2 FACTORS IN OTC DERIVATIVES PROCESSING.....	8
3. PARTICIPANTS.....	10
3.2 SUMMARY OF ORGANISATIONS INTERVIEWED.....	10
3.3 SUMMARY OF INFORMAL SOUNDINGS	11
4. FINDINGS FROM MARKET SURVEY	12
4.1 MARKET SIZE	12
4.2 PARTICIPANTS' CHARACTERISTICS	15
4.3 COSTS OF PROCESSING.....	19
4.4 SYSTEM DEVELOPMENT IN ORGANISATIONS	28
4.5 PERCEPTIONS OF OUTSOURCING	31
4.6 POTENTIAL FOR OUTSOURCING.....	36
4.7 SIGNIFICANT BUSINESS ISSUES	45
4.8 ASSESSMENT OF POTENTIAL SUPPLIERS	52
5. METHODOLOGY AND APPROACH.....	56
5.1 OBJECTIVES OF THE STUDY.....	56
5.2 HOW THE STUDY WAS CONDUCTED	56
5.3 ACKNOWLEDGEMENTS	57
APPENDIX A BACKGROUND TO Z/YEN.....	58
Z/YEN – AN INTRODUCTION	59
Z/YEN IN BANKING	60

Market Survey of OTC Derivative Processing Services

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Overview of Findings

How much is spent on OTC Derivatives?

(Section 4.1, Page 12)

Who participated in the study?

(Section 3, Page 10; Section 4.2, Page 15)

How much does processing cost participants?

(Section 4.3, Page 19)

How are participants' systems developing?

(Section 4.4, Page 28)

How do participants perceive outsourcing?

(Section 4.5, Page 31)

How will the market for outsourcing develop?

(Section 4.6, Page 36)

**What business issues will affect
the market for outsourcing?**

(Section 4.7, Page 45)

**How do existing and potential suppliers
rate in the market?**

(Section 4.8, Page 52)



1. INTRODUCTION

1.1 Market for OTC derivative processing services

1.1.1 The past few years have witnessed an explosion in the value and usage of OTC derivatives. The Bank of International Settlements (BIS) estimates the notional value of derivatives contracts outstanding in OTC markets in 1998 reached \$80 trillion. The Bank of England estimated in 1998 that \$474 billion was traded globally every day (over \$100 trillion per annum), of which \$171 billion or 36% was traded in the UK. The Bank of International Settlements has also estimated the gross market values of OTC derivatives to be \$3.2 trillion.

1.1.2 At the same time, the Bank of England estimated that OTC currency and interest rate derivatives turnovers are growing at 32% every year. Volumes such as these require a major investment in processing. Until now the costs of transactions have been difficult to estimate, given that most available information relates to values traded rather than volumes or numbers of trades. We have estimated that total annual OTC derivative processing costs range between \$2.1 and \$2.3 billion in the UK alone, of which between \$346 million and \$574 million are back office costs only (although there are difficulties apportioning technology costs and costs of errors).

1.2 Background to this study

1.2.1 If, as the most recent ISDA survey of the market suggests, the days of exponential volume growth may be numbered, this seems like the right time to come to terms with the costs associated with OTC derivatives and to consider how margins can be improved. This Market Survey aimed to assess the size of the market for OTC derivative processing services, report on the reactions to outsourcing as a 'Concept', identify the key factors which would lead organisations to outsource their OTC derivative processing and assess the suppliers which exist or may emerge in this market.

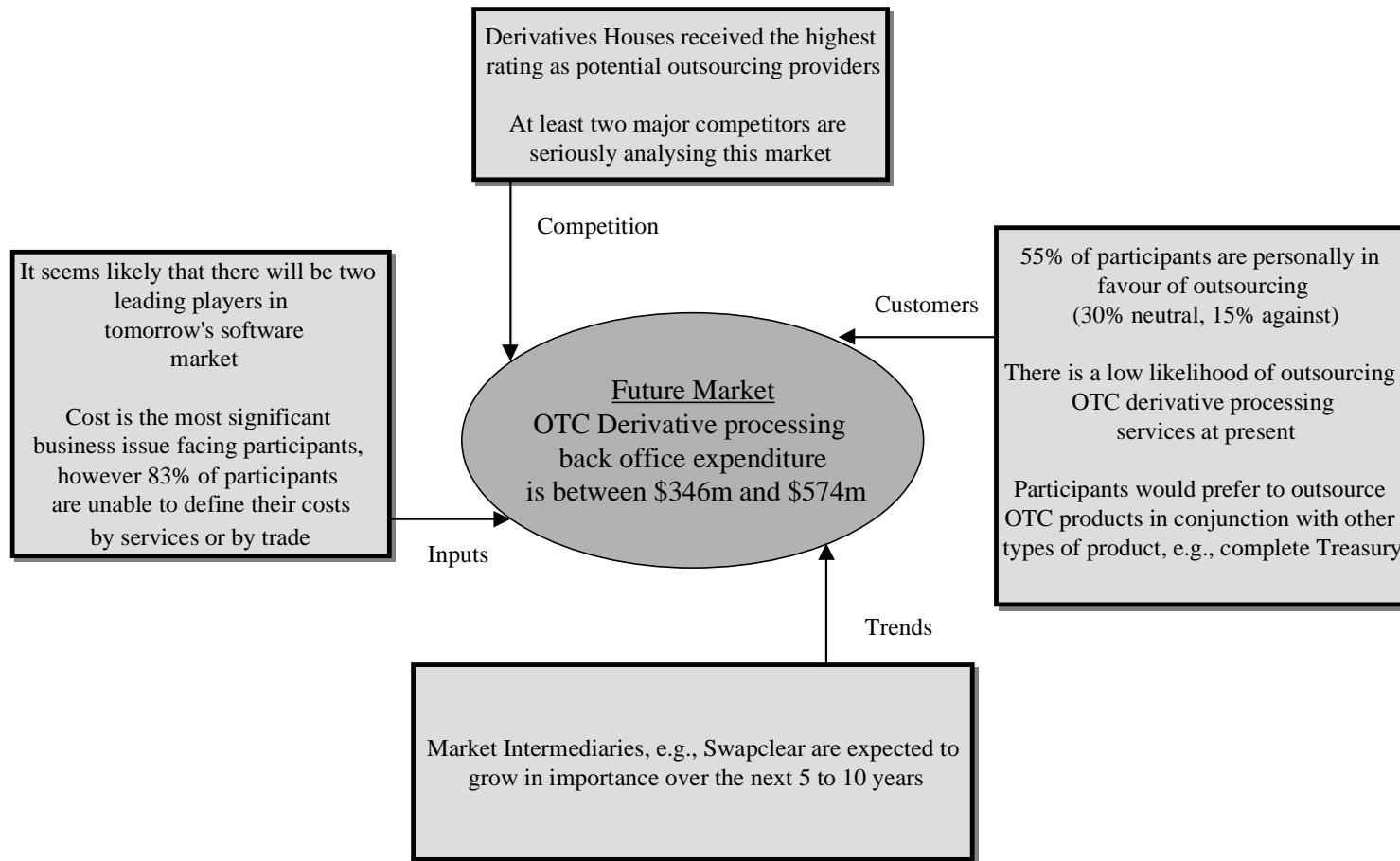
1.2.2 Based on the scale of current processing costs and participants' reactions to the concept of outsourcing products and services, we estimate there will be a potential market of between \$400 million and \$600 million for outsourcing OTC derivative processing services. This market is unlikely to emerge in the next 18 months, but could develop within 36 months.

1.2.3 The study contains the views of some of the largest players in the OTC derivatives market, discussing their perceptions of current business issues and their views on how they see the market developing in the future. It should make essential reading for all those involved in OTC derivatives and provide a useful starting point for discussions on the options they have to ensure their future success.

1.2.4 If you would like to discuss this study further, please call Michael Mainelli at Z/Yen Limited on (0171) 562-9562.



Summary of Report Findings





2. MANAGEMENT SUMMARY

2.1 Highlights of findings

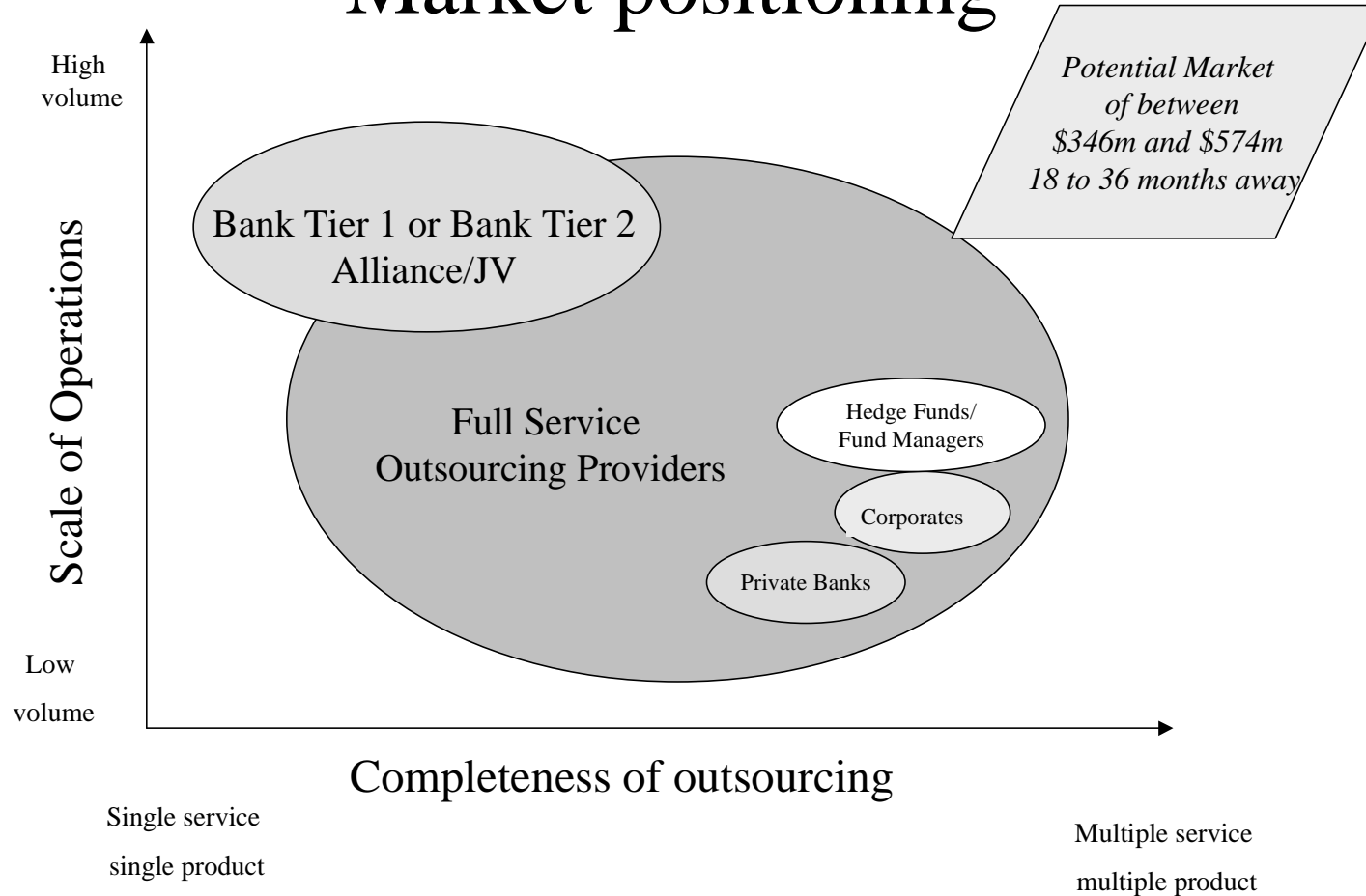
2.1.1 Based on the scale of current processing costs and participants' reactions to the concept of outsourcing products and services, we estimate there will be a potential market of between \$400 million and \$600 million for outsourcing OTC derivative processing services. This market is unlikely to emerge in the next 18 months, but could develop within 36 months.

2.1.2 The major findings from the survey were:

- ◆ **Expenditure on OTC derivative processing (Section 4.1):** Expenditure ranges from \$2.1bn to \$2.3bn in the UK, of which back office costs are between \$346m and \$574m (although there are difficulties apportioning technology costs and costs of errors). London is the key global location for OTC derivative processing.
- ◆ **Costs of processing (Section 4.3):** Participants still do not fully understand their cost base, yet a successful outsourcing provider needs to convince potential purchasers they will reduce costs by outsourcing their processing:
 - 83% of participants are unable to define their costs by services or by trade;
 - participants expect a mean saving of 31% before they will consider outsourcing their processing.
- ◆ **Systems development in organisations (Section 4.4):** There has been a move towards packaged rather than proprietary software systems. It seems likely that there will be two leading players in tomorrow's market, i.e. Summit and Sungard.
- ◆ **Perceptions of outsourcing (Section 4.5):** There is broad support for the concept of outsourcing, but not a lot of experience:
 - 55% of participants were personally in favour of outsourcing (30% neutral, 15% against) and 47% thought their organisation was positive towards outsourcing (31% neutral, 22% against);
 - most participants' experience of outsourcing was in IT management (42%) or Facilities Management of premises (39%);
 - the main concerns to be overcome by a potential outsourcing provider for OTC derivative processing were *liability and legal safeguards, firewalls* to ensure confidentiality and *service levels*.
- ◆ **Likelihood of outsourcing (Section 4.6):** More than three quarters of all participants believe that there is a market for outsourcing OTC Derivative processing, but in the future (at least 18 months):
 - there is a low likelihood of participants outsourcing their OTC derivative processing at present, about 2.3 on a 1 to 5 scale, i.e. between low and medium;



Market positioning





- participants who would consider outsourcing in the future gave 18 months as the most likely timeframe;
 - no one wants to be the first to outsource their operations. Many will not consider outsourcing unless the outsourcing provider already has other clients;
 - 39% of participants have considered entering this market as a supplier themselves.
- ◆ **Products and Services (Section 4.6):** Less than half of participants would consider outsourcing OTC derivative processing by itself, without other products, e.g. complete Treasury outsourcing or the entire back-office. Participants would prefer to outsource OTC products in conjunction with other types of product, and would rather outsource settlement functions than middle office and accounting functions. Risk and analytics were an area of much discussion in determining the outsourcing boundary. Interestingly, 20% to 25% of participants rely on an externally supplied risk modelling package.
- ◆ **Significant business issues (Section 4.7):** Cost is the most significant business issue facing participants and would be the prime motivation for outsourcing, as long as savings of more than 30% could be made:
- an outsourcing provider who can help participants understand their costs is more likely to succeed;
 - after *cost*, *control* and *service levels* are the next most important reasons to outsource. However, *control* and *flexibility* are also the key reasons NOT to outsource.
- ◆ **Assessment of potential suppliers (Section 4.8):** Participants are most likely to outsource to derivative houses, followed by Market Intermediaries, e.g., Swapclear:
- participants rated their own operations department service on average between “moderate credibility” and “credible” (3.4 on a scale of 5) and thought they were going to improve (4.3 in the future);
 - major Banks Tier 1 (Derivatives Houses) get a good rating (3.5) and are expected to improve slightly (3.7 in the future);
 - participants believe market intermediaries, e.g., Swapclear, may be improving and will become more credible outsourcing suppliers in the future.

2.2 Factors in OTC derivatives processing

2.2.1 In the light of these findings, organisations involved in OTC derivatives markets should consider these implications:

- ◆ **Developing market for OTC derivative processing services:** OTC derivatives are more likely to be outsourced as part of a larger back office or general outsourcing programme across a wider range of products or technology. Participants believe that there is a market for outsourcing OTC areas in the future, but timescales were at least a year away and participants were unlikely themselves to buy (“there is a market in the future, but not for me”). The market for OTC derivatives processing in the future is



Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999

likely to consist of Banks Tier 2 – Banks Tier 1 see themselves as unique. Corporates, insurers and hedge funds have low volumes of OTC derivatives.

- ◆ **Partnership option:** Banks Tier 1 are interested in providing OTC derivative processing internally or operating a shared service facility with another Bank Tier 1. Banks Tier 1 do not seem to be interested in purchasing outsourcing services, rather they would consider establishing a shared service consortium for processing services with banks of similar status. Banks Tier 2 are also interested in a shared service facility, but may buy outsourcing in the future if other banks do so (“follow the herd”).
- ◆ **Cost awareness:** Cost is the key current business issue and the primary reason to outsource, as long as clients can be assured of saving at least 30%. However the quality of management information about costs was low, making it difficult to pin down where cost savings would come from. There may be an opportunity for an outsourcing provider to help prospective clients understand their costs, thereby leading to potential sales. Participants key concerns (after cost) are: liability (who bears the cost of errors), confidentiality and service levels.
- ◆ **Quality issues:** Derivatives Houses are perceived as the most credible suppliers of outsourcing services, both now and in the future, and received higher ratings than participants’ own operations departments. Perceptions of any Derivative House providing outsourcing will be affected by the interactions of participants with that Derivative House as a trading entity in the market for OTC derivatives.
- ◆ **Technology standardisation:** The software used by a prospective outsourcing provider is seen as important. There is a general move to packaged systems. Packaged systems are perceived as better (wider range of functions) and safer (easier to transfer from an outsourcing supplier with a package to another with the same package) than proprietary systems. Tomorrow’s software market is likely to consolidate into two leading players – Summit and Sungard. It is likely that the perceived ease with which potential purchasers can move from one supplier to another as the market develops will be important.



3. PARTICIPANTS

3.1.1 A total of 53 interviews were conducted and 65 informal soundings were taken. A full list of these organisations follows:

3.2 Summary of organisations interviewed

Banks:

Allied Irish Banks
Bank America/Nations Bank
Bank of Ireland
Banque Paribas
Barclays Capital
Bayerische Hypotheken Vereinsbank
CIBC
Commerzbank
Credit Anstalt/Bank of Austria
Credit Lyonnais
Credit Suisse First Boston
Den Danske
Dresdner Group/Kleinwort Benson
HSBC
Industrial Bank of Japan
J Henry Schroder Waag
JP Morgan
Landesbank Hessen-Thuringen (Helaba)
Lehman Bros.
Merita Bank Finland
Morgan Stanley
NatWest Markets
Nomura
Rabobank
Robert Fleming Bank
Skipton Building Society
Standard Chartered Bank
Sumitomo Trust
Tokai Bank

Hedge Funds/Fund Managers:

Equitable House Investment
Gartmore Investment Management
Global Asset Management
Helios
Hill Samuel Asset Management
Intercapital
Sloane Robinson
Threadneedle

Insurance:

Axa
Prudential
Royal Sun Alliance

Corporates:

Shell Capital

Other, e.g. regulators, software suppliers:

Abbey National
Andersen Consulting
Banking Technology
British Bankers Association
Consultant to Rabobank
EDS
Financial Services Authority
Hammond Suddards
International Swaps and Derivatives Association
Lombard Risk Systems
The Derivatives & Securities Consultancy
TSI International (Braid Systems)



3.3 Summary of informal soundings

Banks:

Arab Banking Corporation
Argentaria
Co-operative Bank
Credit Lyonnais
Den Norske
DG Bank
Dunbar Bank
European Bank for Reconstruction and Development
HSBC/Midland
ING
Julius Baer International
Leonia Bank
Merita Bank Finland (UK)
National Bank of Egypt
NatWest Markets (Greenwich)
Nikko Bank
Nykredit Bank
Republic Bank of New York
Royal Bank of Scotland
Sakura
Santander
Sanwa Bank
Societe General
State Street Bank
Svenska Handelsbanken (AB)
Warburg Dillon Read

Hedge Funds/Fund Managers:

Chiswell Associates
GNI Fund Management
Hermes
Leopold Joseph
Liontrust Asset Management
Pareto Partners
Sabre Argyll Fund Management
Saracen Asset Management
TT International

Insurance:

AIG (American Insurance Group)
American Re
Aon Corp
Rhine Re
Scandinavian Re
Stockton Re

Corporates:

Amey
BP
Cadbury Schweppes
CIBA-GEIGY
Eastern Group
EMI Group
Ericsson
Sema

Other, e.g. regulators, software suppliers:

Algorithmics
Bank for International Settlements
Bank of England
City University Business School
Futures and Options Association
Futures and Options World
International Swaps and Derivatives Association
London Business School
Rolfe and Nolan
Royal Blue
Summit
SunGard/Infinity
SwapClear
Warwick Business School



4. FINDINGS FROM MARKET SURVEY

Findings from the interviews have been summarised in table and chart format. Tables show the breakdown of responses given to the question preceding that table. Extracts from interviews have been used to lend weight to particular findings. Responses in some cases were given on a scale of 1 to 5, where 1 = low and 5 = high.

4.1 Market Size

As a result of the research described in Section 5.2 below, a model of the total investment in OTC derivative processing was created. The model:

- ◆ uses Bank of England data on transaction values by instrument (Swaps, options, FRAs etc);
- ◆ uses average transaction sizes from JP Morgan, ISDA, and software suppliers;
- ◆ uses transaction cost figures from JP Morgan, a 1992/93 study which Z/Yen people undertook on wholesale transaction costs, SwapClear, and software suppliers;
- ◆ assumes a bimodal distribution of costs.

4.1.1 Expenditure on OTC derivative processing

The lower case estimates assume that:

- ◆ back office processing costs are reduced by STP and computerisation;
- ◆ 40% of transactions are processed 'clean';
- ◆ back office costs reduced to \$15 per transaction.

The higher case estimates assume:

- ◆ 10% of contracts are unsettled after 90 days, as found by a comprehensive processing survey conducted by the Bank of International Settlements;
- ◆ back office costs from those unsettled clients are increased by 1 standard deviation from mean costs.

Both cases suffer from a lack of clarity regarding the allocation of technology costs e.g. operational or capital expenditure, as well as uncertainty over divisions between front and back offices. Some of the estimates of total back office costs we have seen have been as high as \$948 million.

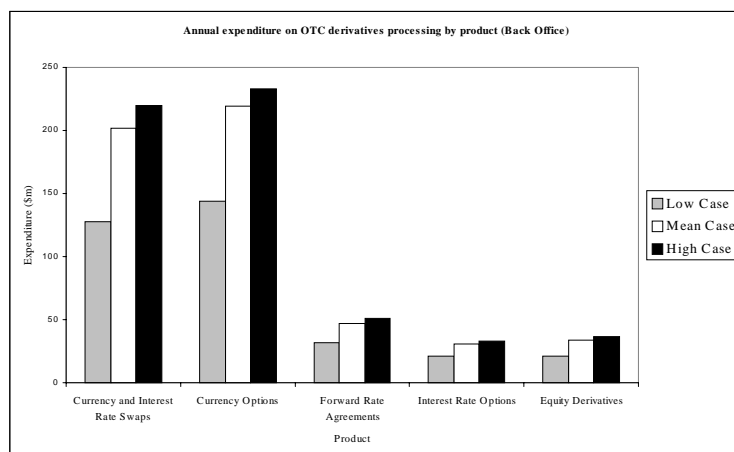
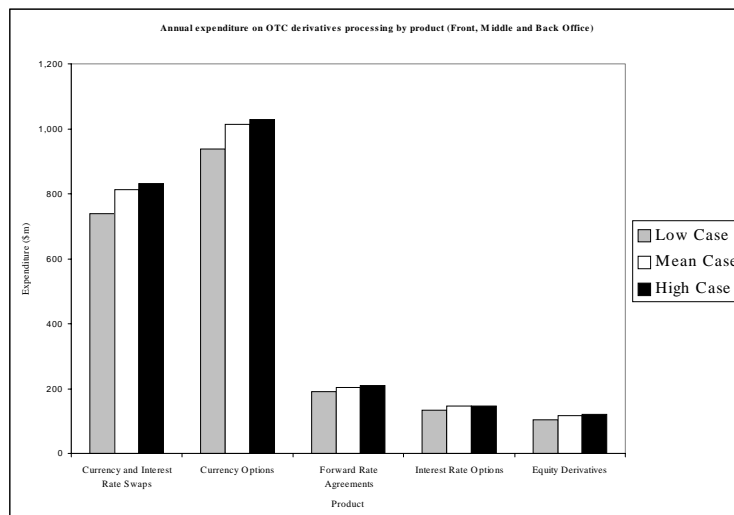
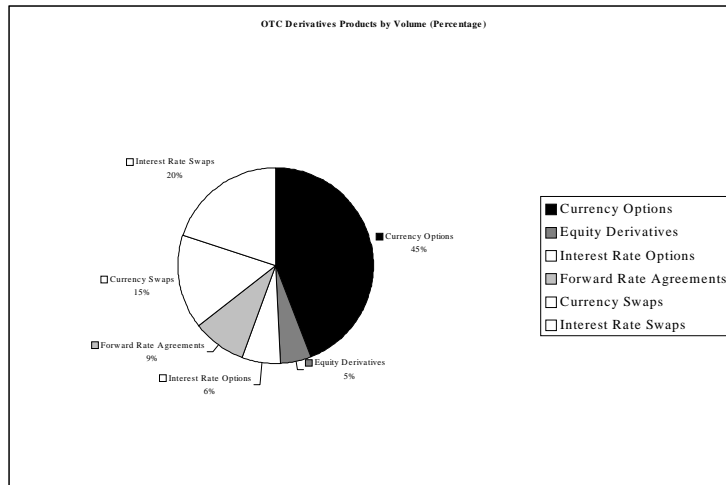
Total expenditure on OTC derivatives (sales, administration and processing):

Estimate of costs	Lower Case	Mean Case	Higher Case
	\$	\$	\$
Total expenditure on OTC derivatives	2.104bn	2.292bn	2.335bn



Market Survey Of OTC DERIVATIVE PROCESSING SERVICES October 1999

Market Size





Total expenditure on OTC derivative processing (Back Office)

Estimate of costs	Lower Case \$	Mean Case \$	Higher Case \$
Total Back Office OTC derivative processing costs	346m	533m	574m

4.1.2 Breakdown of expenditure on OTC derivatives by product

Annual expenditure on OTC derivatives processing by product (Front, Middle and Back Office)

(Sources: Bank of England, JP Morgan, ISDA, Swapclear)

Derivative	Lower Case \$	Mean Case \$	Higher Case \$
Currency and Interest Rate Swaps	738m	813m	831m
Currency Options	938m	1.013bn	1.028bn
Forward Rate Agreements	190m	204m	209m
Interest Rate Options	134m	145m	147m
Equity Derivatives	104m	117m	120m
Total	2.104bn	2.292bn	2.335bn

In a recent survey by the Bank of International Settlements (published June 1999), outstanding OTC derivatives contracts around the world were reviewed. Interest rate instruments were by far the largest part of the OTC market (72%), followed by Foreign Exchange products (26%) and those based on equities (2%, of which 0.5% is made up of Swaps and 1.5% of options and other derivatives).

Annual expenditure on OTC derivatives processing by product (Back Office)

(Sources: Bank of England, JP Morgan, ISDA, Swapclear)

Derivative	Lower Case \$	Mean Case \$	Higher Case \$
Currency and Interest Rate Swaps	128m	202m	220m
Currency Options	144m	219m	233m
Forward Rate Agreements	32m	47m	51m
Interest Rate Options	21m	31m	33m
Equity Derivatives	21m	34m	37m
Total	346m	533m	574m



4.2 Participants' Characteristics

A total of 53 interviews were conducted from a range of organisations, primarily Banks and Hedge Funds/Fund Managers.

Breakdown of participants by organisation

Type of organisation	(Number)	(Percentage)
Bank – Tier 1	11	20
Bank – Tier 2	18	34
Hedge Fund/ Fund Manager	8	15
Insurance	3	6
Corporate	1	2
Other e.g. press, software	9	17
Regulator	3	6
Total	53	100%

Breakdown of participants by job function

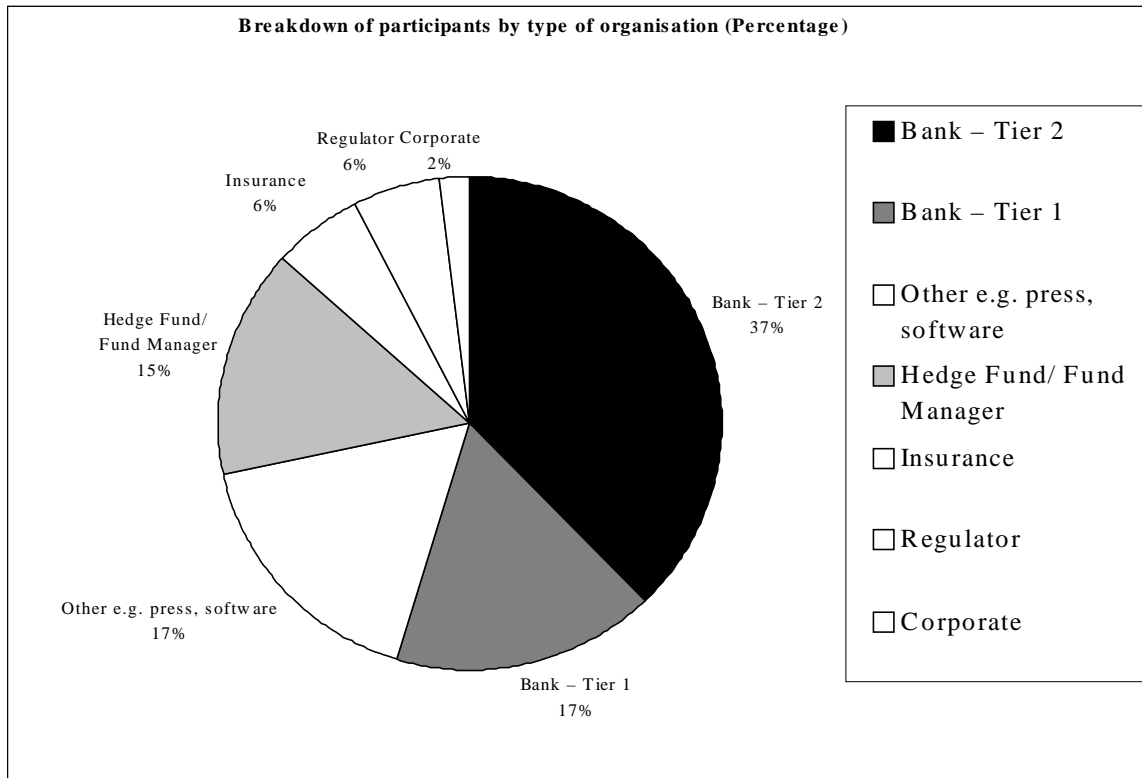
Description of job function	(Percentage)
Head of Operations	19
Head of Treasury	11
Head of Derivatives	9
Head of Back Office	6
Head of Technology	4
General Manager	24
Head of Trading	2
Other Role	2
N/A e.g. Chairman, business development, lawyer, regulator, press, consultant	23

65 informal soundings were taken with organisations who were not appropriate for a full interview but whom Z/Yen felt would have something relevant to contribute.

The findings in this section only relate to those organisations with which interviews were conducted.



What type of organisations participated in the study





4.2.1 Question:

“Do you trade in these products and if so, how often?”

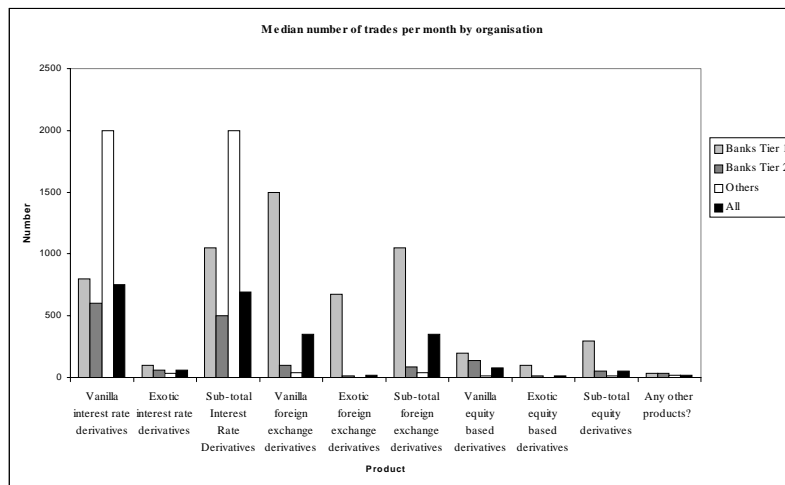
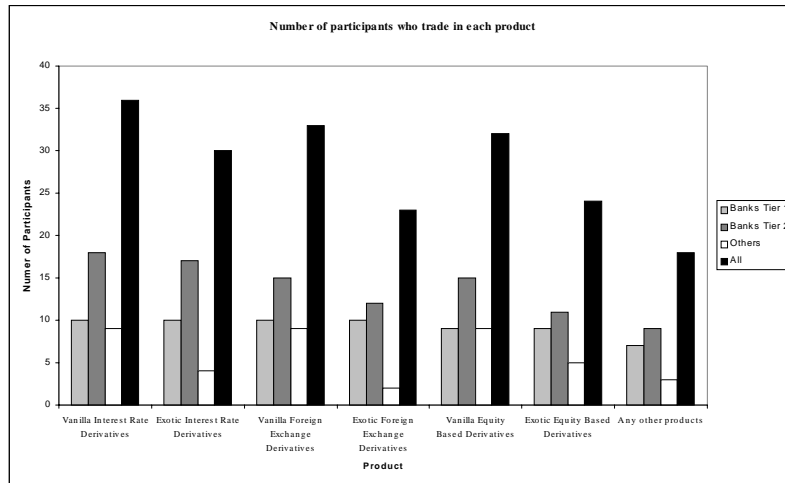
Product	Number of participants who trade in this product	Minimum number of trades per month	Median number of trades per month	Maximum number of trades per month
Vanilla interest rate derivatives	36	3	750	6,000
Exotic interest rate derivatives	30	1	60	600
Sub-total	N/A	3	690	6,600
Vanilla foreign exchange derivatives	33	10	350	50,000
Exotic foreign exchange derivatives	23	5	20	10,000
Sub-total	N/A	10	350	60,000
Vanilla equity based derivatives	32	2	80	6,000
Exotic equity based derivatives	24	1	10	150
Sub-total	N/A	2	55	6,000
Any other products? e.g. commodities	18	5	20	60

4.2.2 The charts on the following page show the numbers of Banks Tier 1, Banks Tier 2 and all others who trade in each product, and the median number of trades for each of these three groups.



**Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999**

Products which participants trade in





4.3 Costs of processing

4.3.1 Gross cost of processing in each organisation

4.3.1.1 Question:

“Can you tell me the gross cost of your processing operations?”

“Has anyone been able to answer this question?” Bank Tier 2

Responses	(Frequency)
Response given	19
Unsure	9
Refused to answer	6
Not applicable/missing	20

4.3.1.2 Question:

“What are the gross costs of your processing operations?”

Sector	Minimum (£)	Median (£)	Maximum (£)
All organisations	20,000	4.5m	138m
Banks Tier 1	9m	27m	45m
Banks Tier 2	2m	2.5m	138m*
Hedge Funds/Fund managers	600,000	4.85m	7m

* Global OTC Derivatives costs from a continental bank



4.3.2 Breakdown of costs in each organisation

4.3.3 Question:

“Please break down your costs according to staffing, operations technology, premises, errors and others.”

Cost area	Minimum (Percentage)	Median (Percentage)	Maximum (Percentage)
Staffing	5	53	80
Premises	8	20	35
Operations technology	6	25	80
Errors*	0	0	10
Other	2.5	2.5	15

* Errors are probably a significant cost at a few percentage points. However many participants did not give a coherent answer, or appeared to wish to present errors as non-existent or zero, yet later referred to significant processing costs in errors as a current problem. The low estimates we received contrast with the Bank of International Settlements findings that there are discrepancies in 5 to 10% of confirmations and that a “small but significant” backlog remains outstanding for 90 days or more.

4.3.4 Levels of staffing

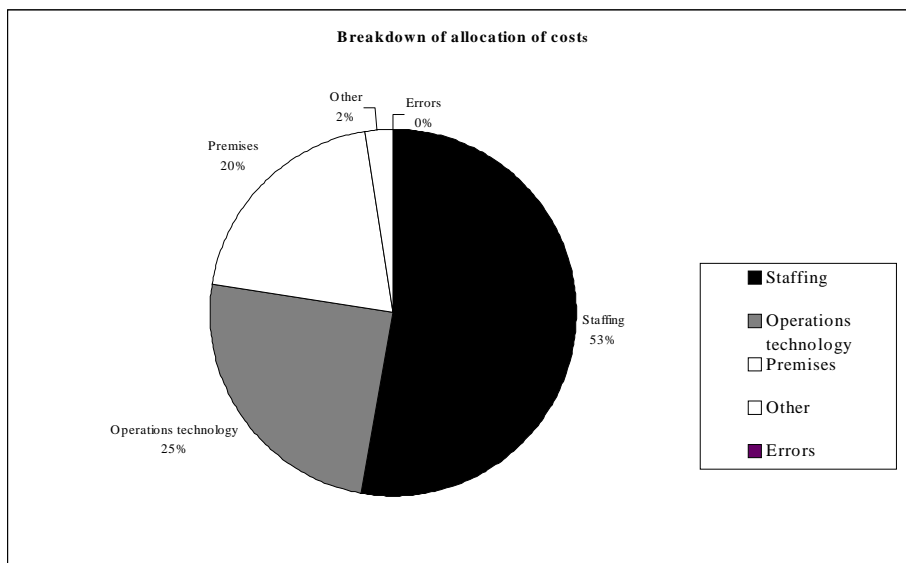
4.3.4.1 Question:

“How many staff do you have in your front, middle and back offices?”

Product area	Front Office Staffing Median	Middle office staffing Median	Back office staffing Median
Interest rate derivatives	20	8	17
Equity derivatives	12	6	4
Foreign exchange derivatives	4	3	5
Total	23	10	25



How costs are allocated



Errors are probably a significant cost at a few percentage points. However many participants did not give a coherent answer, or appeared to wish to present errors as non-existent or zero, yet later referred to significant processing costs in errors as a current problem.



4.3.4.2 Question:

“How many dedicated technology staff do you have?”

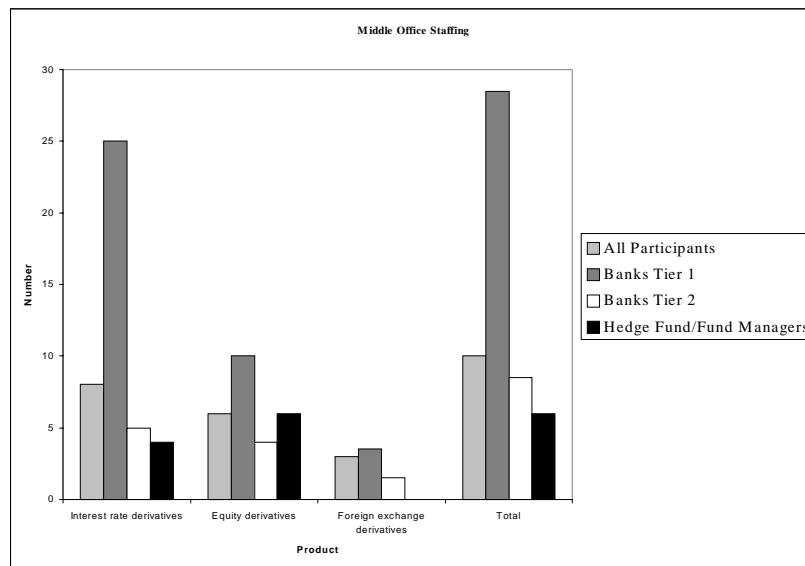
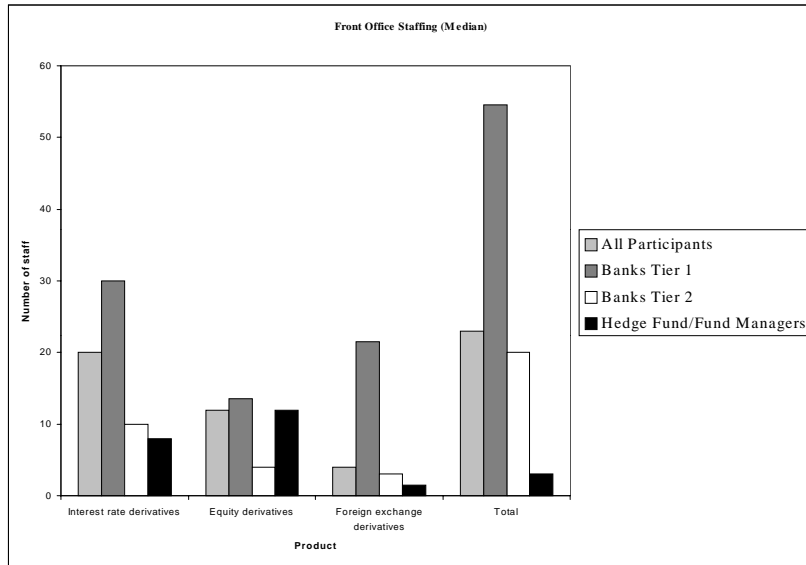
Product	Minimum	Median	Maximum
Interest rate derivatives	3	6	35
Equity derivatives	1	2	20
Foreign exchange derivatives	1	2	15
Total	1	8	100

4.3.4.3 The charts on the following pages show the numbers of staff in the front, middle and back office and dedicated technology staff in all organisations, Banks Tier 1, Banks Tier 2 and Hedge Fund/Fund Managers.



Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999

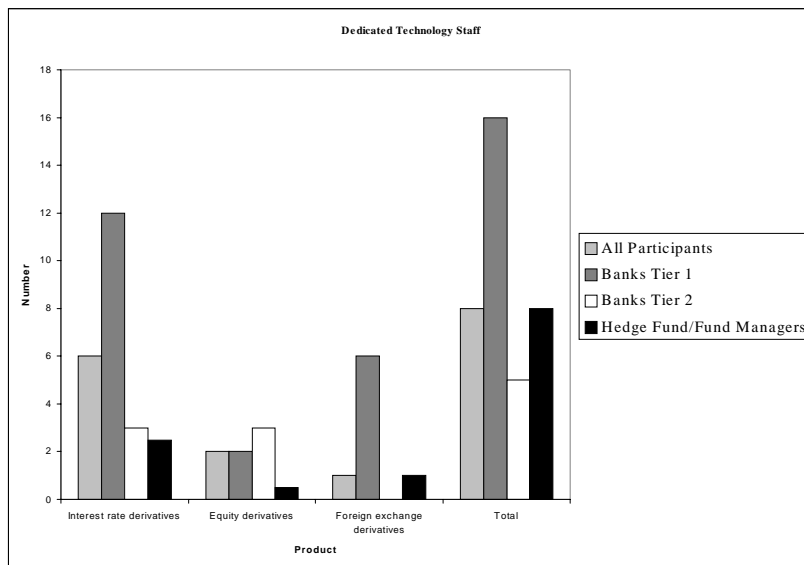
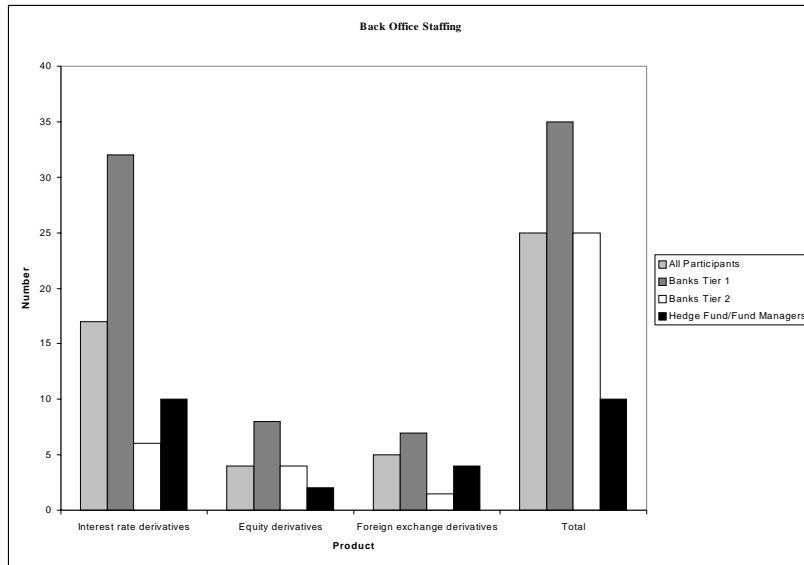
Mean staffing in organisations





Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999

Mean staffing in organisations





4.3.4.4 Question

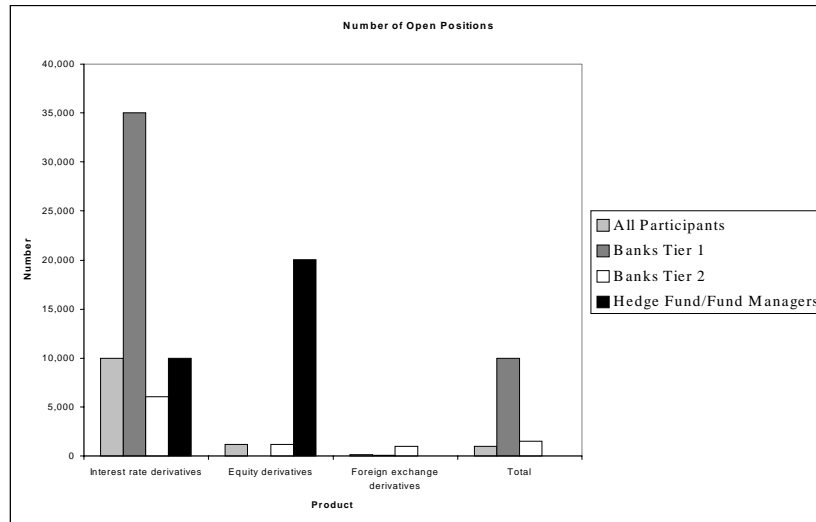
“How many open positions do you have at any one time?”

Product	Minimum	Median	Maximum
Interest rate derivatives	90	10,000	60,000
Equity derivatives	10	1,200	40,000
Foreign exchange derivatives	5	150	75,000
Total	10	1,000	100,500

The chart on the following page shows the number of open positions at any one time for all organisations, Banks Tier 1, Banks Tier 2 and Hedge Funds/Fund Managers



Number of open positions by organisation





4.3.5 Mechanism for allocation of costs

4.3.5.1 Question:

“How do you allocate your processing costs in your business?”

*“We have no idea of gross cost as the departments are so integrated”
Fund Manager*

Mechanism for re-charging costs	(Percentage)
Not allocated/budget	23
Re-allocated	60
Charge for services	6
Charge per trade	11

4.3.6 Savings required to consider outsourcing

4.3.6.1 Question:

“What level of annual savings in percentage terms would you require to consider outsourcing your processing?”

“We don’t know the gross costs or cost structure ... Cost is the most important factor for us” Bank Tier 2

Level of saving required	(Percentage)
Minimum Saving Required	1
Mean Saving Required	31
Maximum Saving Required	50



4.4 System development in organisations

4.4.1 How offices are structured

4.4.1.1 Question:

“Are your middle and back offices structured vertically by product or horizontally by function?”

Office	Horizontal Structure (Percentage)	Vertical Structure (Percentage)
Back Office	69	31
Middle office	61	39

This question was frequently a topic of debate. One participant put forward “the birthday cake model” where trader support and product-specific middle office were the candles. Processing (back-office) and infrastructure formed at least two layers of ‘cake’ below the candles.

4.4.1.2 Question:

“Where are your principal OTC derivatives processing centres located?”

Location of processing centres	(Frequency)
London	17
New York	5
Tokyo	4
Singapore	4
Dublin	2
Paris	2
Hong Kong	2
Frankfurt	2
Utrecht	1
The Hague	1
Finland	1
Toronto	1
Vienna	1
San Francisco	1

13 Organisations used a combination of these cities.



4.4.1.3 Question:

“Are you using proprietary or supplied software, or a combination of the two?”

Type of Software	(Frequency)
Proprietary/In-house	9
External Package	14
Combination of the two	14

4.4.1.4 Question:

“Which package do you use? Who is the principal vendor in the market?”

Name of package	Software used by participant (Frequency)	Principal market vendor (Frequency)
Proprietary Package	9	N/A
Eclipse	2	1
Devon/Sungard/Infinity	6	12
Summit	3	10
Murex/Murex MXPlus	5	2
Lombard Risk	3	1
Paradigm	2	
Rolfe and Nolan	3	3
Other (including CATS, Fidelity, Quantum, Atlas, GMI,	8	8

Some participants use more than one package

4.4.1.5 Question:

“Are your risk models proprietary or a bought in package?”

Purpose	Proprietary (Percentage)	Supplied (Percentage)	Both (Percentage)
Pricing	70	22	8
Valuation	69	25	6
Regulatory Capital	65	20	15



4.4.1.6 Question:

“Who is the vendor of your risk package?”

Name of package	Vendor of package (Frequency)
Risk Metrics	4
Algorithmics	1
Other (including FEA, Cobra, CME)	7



4.5 Perceptions of outsourcing

4.5.1 Personal and corporate perceptions of outsourcing

4.5.1.1 Question:

“How would you rate your personal perceptions of outsourcing?”

Personal Perception	(Percentage)
Negative	15
Neutral	30
Positive	55

4.5.1.2 Question:

“How would you rate your corporate perception of outsourcing?”

Corporate Perception	(Percentage)
Negative	22
Neutral	31
Positive	47

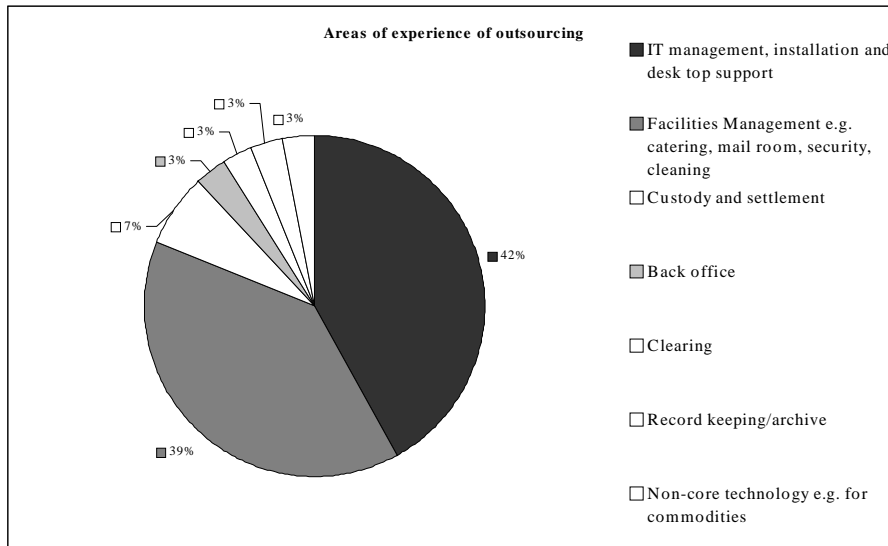
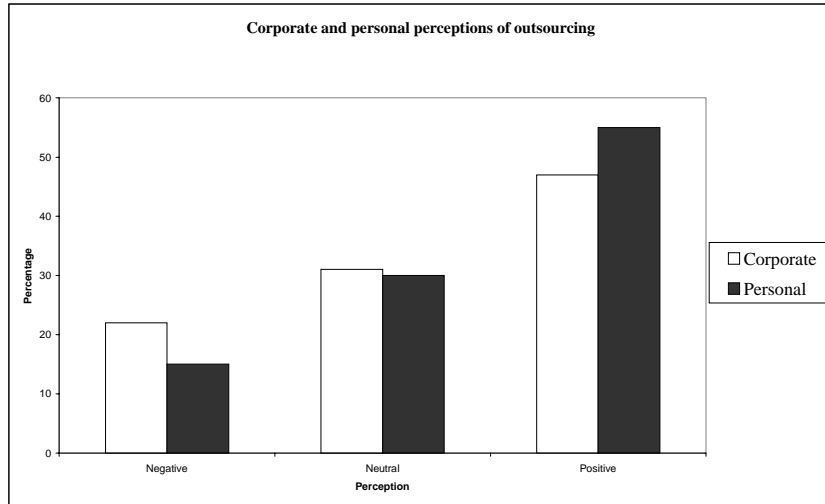
4.5.1.3 Question:

“Have you had experience of outsourcing in the past?”

Experience	(Percentage)
Yes	45
No	55



Perceptions and experience of outsourcing





4.5.1.4 Question:

“What areas has this experience been in?”

Area of Experience	(Percentage)
IT management, installation and desk top support	42
Facilities Management e.g. catering, mail room, security, cleaning	39
Custody and settlement	7
Back office	3
Clearing	3
Record keeping/archive	3
Non-core technology e.g. for commodities	3

4.5.1.5 Question:

“If you have had experience of outsourcing, how did you rate that experience?”

Rating	(Percentage)
Negative	9
Neutral	23
Positive	59
No response	9



4.5.1.6 Question:

“What are your key concerns over outsourcing in the Capital Markets area?”

“We don’t just outsource on a cost driven basis – it has to be better than what we could do” Insurance Company

Most Frequent Major Concerns	(Frequency)
Liability, due diligence and legal contracts	17
Firewalls	8
Service levels	6
Cost	5
Long Term Commitment from Provider	4
Staffing	4
Credit rating	3
Dependency on one supplier	2
Track record	2
Credibility	2
Capital	1

4.5.1.7 Question:

“What barriers to outsourcing have you experienced?”

“Outsourcing can be beneficial in some circumstances however it can also carry certain risks e.g. loss of control” Bank Tier 1

Summary of responses to Question 4.5.1.7:

- ◆ “we could not see that it would provide any value”;
- ◆ “there was no compelling driver to complete exercise”;
- ◆ “we are waiting for an industry wide clearing house to develop”;
- ◆ “there were many teething problems getting it off the ground”;
- ◆ “we would have grave concerns about documentation and confirmations”;
- ◆ “there were too many problems with communication”;
- ◆ “the proposed service levels were inadequate for our needs”;
- ◆ “outsourcing providers were unable to provide the range of services required”;
- ◆ “senior management lacked confidence in the proposed outsourcing providers”.



4.5.1.8 Question:

“What would you need to help you convince very senior management that outsourced OTC derivative processing services can and do work?”

“We would wait to see this market mature – we would not want to be first” Bank Tier 2

Information required	(Frequency)
Other clients	19
Track record of supplier	9
Good presentation of plan	8
Due diligence	4
Long processing tail e.g. SWAPS	4
Confidence in handling liability	4
Proof of cost savings	3
Complete package	2
Other	2
Nothing would convince them	4



4.6 Potential for outsourcing

4.6.1 Participants' views on future market development

4.6.1.1 Question:

“How do you see the processing of financial products, and specifically OTC derivatives, changing over the next 5 to 10 years?”

*“OTC derivatives will end up like FX, MM. Vanilla products are just getting up to speed and making best use of technology e.g. STP”
 Bank Tier 2*

Development	(Frequency)
Technology will increase: E-commerce and internet trading will drive standardisation	9
Clearing house will develop	6
Products will become standardised, exotics will become vanilla	5
Straight Through Processing will become a reality	4
Drive to reduce costs	2

4.6.1.2 Question:

“How big a part do you think that outsourcing will play in the next 5 to 10 years?”

“Outsourcing is happening slower than anticipated. In any case we will have auto clearing and confirms and settlement through Swapclear” Bank Tier 2

Future role of outsourcing	(Percentage)
Increase	38
Remain the same	18
Will grow for niche products	9



4.6.2 Likelihood of outsourcing OTC Products

4.6.2.1 Question:

“What is the likelihood of your organisation outsourcing these products at the moment?”

*“This is not a big area for us and not likely to be at the top of our agenda.
If we saw a sensible proposal, we would look at it”
Insurance Company*

Product	Mean
Vanilla interest rate derivatives	2.6
Exotic interest rate derivatives	2.3
Vanilla foreign exchange derivatives	2.3
Exotic foreign exchange derivatives	2.3
Vanilla equity based derivatives	2.0
Exotic equity based derivatives	2.0
Any other products? e.g. commodities	2.0

Likelihood of outsourcing has been rated on a scale where 1 = low likelihood and 5 = high likelihood



4.6.2.2 Question:

“How soon would you consider outsourcing these products?”

Product	Most Common Response
Vanilla interest rate derivatives	18 months
Exotic interest rate derivatives	18 months
Vanilla foreign exchange derivatives	18 months
Exotic foreign exchange derivatives	18 months
Vanilla equity based derivatives	18 months
Exotic equity based derivatives	24 months
Any other products? e.g. commodities	30 months

4.6.2.3 Question:

“Do you think there will be a market for outsourcing these products in the future regardless of your likelihood of doing so?”

Product	Mean
Vanilla interest rate derivatives	3.8
Exotic interest rate derivatives	3.5
Vanilla foreign exchange derivatives	3.8
Exotic foreign exchange derivatives	3.6
Vanilla equity based derivatives	3.5
Exotic equity based derivatives	3.6
Any other products? e.g. commodities	3.4

Likelihood of a future market has been rated on a scale where 1 = low likelihood and 5 = high likelihood



4.6.2.4 Question:

“Do you believe there is a market for outsourcing OTC derivative processing whether or not you are interested?”

Response	(Percentage)
Yes	77
No	2
Maybe	21

“There is a gap in the market for second tier players and corporate treasurers who will have to get a lot more sophisticated about recording and accounting for their transactions” Bank Tier 2

4.6.2.5 Question:

“Are you interested in the potential of outsourcing as an option for your processing operations?”

Response	(Percentage)
Yes	25
No	42
Maybe	33

See response to question 4.6.2.2. Most participants would not consider outsourcing for their processing operations for at least 18 months.



4.6.2.6 Question:

“How would you prefer to outsource your products?”

*“I struggle to see an advantage for outsourcing just OTC products which are high risk, not worth a few documentation clerks’ salaries”
 Bank Tier 2*

Response	Some OTC products without the others (Percentage)	OTC Products with other products (Percentage)
Preferable	50	46
Less preferable	38	31
Not sure	12	23

4.6.2.7 Question:

“Is outsourcing OTC derivatives processing different from other forms of outsourcing?”

Processing is marginal – as long as you get it right!” Bank Tier 2

Distinguishing Feature	(Percentage)
Distinguished by complexity	29
More bespoke/less standardised products	20
There is no difference	15
High risk	15
Importance of accuracy	10
Long processing tail e.g. Swaps	10



4.6.2.8 Question:

“How do you think OTC Derivative outsourcing services ought to be priced?”

Pricing Structure	(Frequency)
Fixed fee	8
Per transaction	7
Flexible depending on type of service	11



4.6.3 Products and services which may be outsourced

4.6.3.1 Question:

“Would you consider outsourcing these operations”

“The advantage of doing processing in-house is eroding. There are lots of sloppy processing functions, which will get sorted out by the trend to outsourcing” Bank Tier 2

Service	Yes	No	Maybe
Confirmation production and matching	58	27	15
Capture of market rates and calculation of settlement amounts	51	24	25
Payments e.g. cash administration and management	43	25	32
Nostro reconciliations	58	27	15
Daily funding information	50	33	17
Generation of G/L accounting entries	47	24	29
Production of key MIS. e.g. key operational statistics	50	23	27
Processing of exchange traded products used as hedges	60	20	20

4.6.3.2 Question:

“Would you consider outsourcing these middle office services?”

“Operational services are difficult to outsource because they cut across so much management responsibility” Bank Tier 2

Service	Yes	No	Maybe
Mark to market valuation of vanilla and structured transactions	39	36	25
Production of daily P&L	32	50	8
Production of daily market risk and risk limit reports, e.g. VAR	23	46	31



4.6.3.3 Question:

“Would you consider outsourcing these financial accounting and control services?”

Service	Yes	No	Maybe
Independent review of daily P&L	23	64	13
Production of monthly financial accounting package	33	47	20
Reconciliation of reported P&L to G/L	28	67	5
Provision of regulatory reporting information	23	57	20

4.6.3.4 Question:

“Would you consider outsourcing any other requirements?”

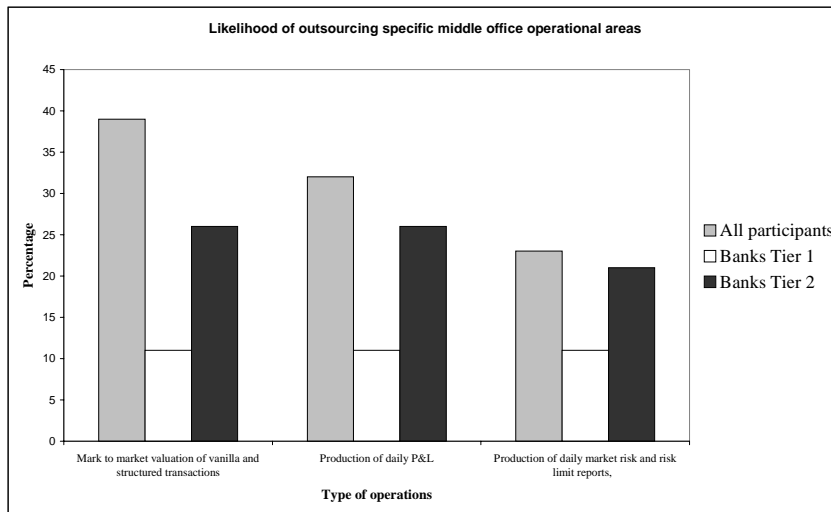
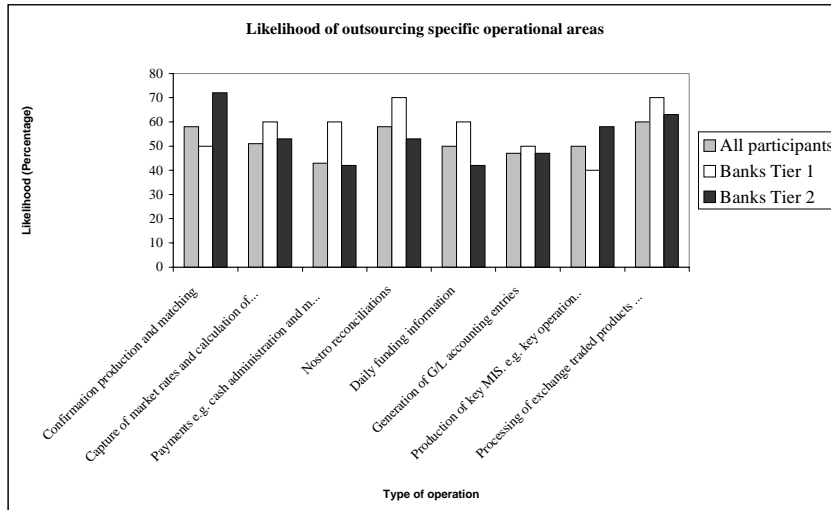
Service	Yes	No	Maybe
Credit provisioning, credit exposure calculation and feed to company's credit systems	15	43	42
Collateral Management	33	31	36
Customer Valuations	32	37	31

4.6.3.5 The charts on the following pages show the how likely all organisations; Banks Tier 1 and Banks Tier 2 are to outsource the services listed in questions 4.6.3.1 to 4.6.3.4.



**Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999**

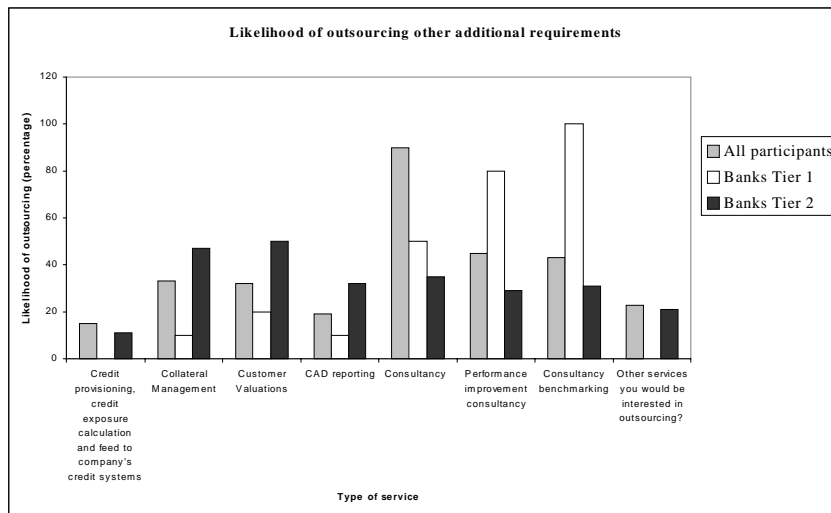
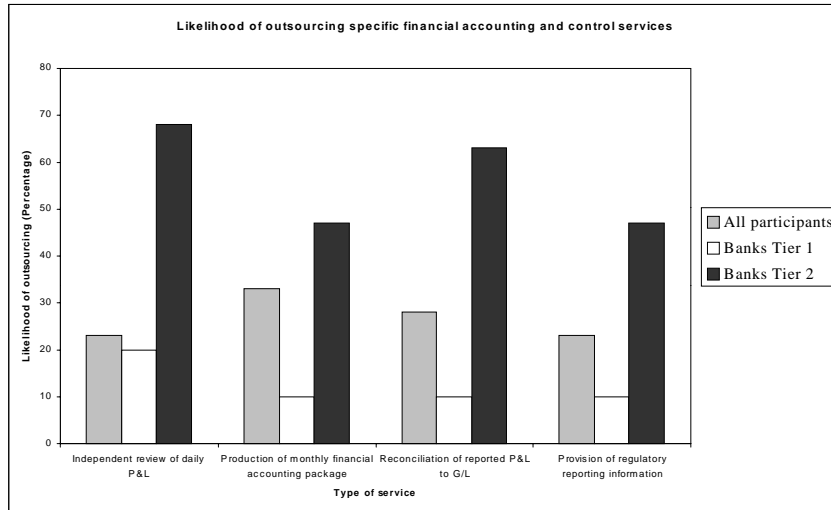
Products and services which may be outsourced





**Market Survey Of
OTC DERIVATIVE PROCESSING SERVICES
October 1999**

Products and services which may be outsourced





4.7 Significant business issues

4.7.1 Factors which would encourage you to outsource more services

Each factor has been rated on a scale of 1 to 5 where 1= low significance and 5 = high significance

4.7.1.1 Question:

“To what extent would you rate these factors as a reason to outsource?”

Reason to outsource	Mean
Cost:	3.8
• <i>Operations costs</i>	4.2
• <i>Technology costs</i>	4.1
• <i>Move to variable costing</i>	3.4
Service levels:	3.3
• <i>Service levels (SLA)</i>	3.3
• <i>Customer service</i>	2.8
• <i>Relationship management</i>	2.3
• <i>Straight through processing (STP)</i>	3.4
Control:	3.2
• <i>Better MIS</i>	3.0
• <i>Clean audits (e.g. internal)</i>	2.8
• <i>Reduction in errors and claims</i>	3.2
Staff:	3.1
• <i>Attracting and retaining high quality and experienced processing staff</i>	3.3
• <i>Attracting and retaining high quality and experienced technology staff</i>	3.4
Flexibility:	3.0
• <i>Speed of new product processing support</i>	3.0
• <i>Ability to exit markets/products without high restructuring costs</i>	3.3
• <i>Speed of change to support existing products' new services or features</i>	3.2
Strategic partnership:	2.9
• <i>Being in line with other industry participants</i>	2.5
• <i>Keeping up with technology</i>	3.3
Regulatory:	2.8
• <i>Regulatory opinion of your processing ability, e.g. recognition of risk model by regulators</i>	2.9
• <i>Coping with new or changing regulatory demands</i>	3.0
• <i>Dealing with multiple regulatory jurisdictions</i>	2.8



Given the variable ways in which participants could respond, e.g. to a heading, a sub-heading or parts of a heading and sub-heading, the major categories above are not necessarily averages of the sub-categories.

★ Group Differences ★

4.7.1.2 Significant differences between groups: Banks Tier 1 versus Banks Tier 2

- ◆ Banks Tier 1 evaluated flexibility as a relatively insignificant reason to, in comparison to Banks Tier 2, who evaluated flexibility as a moderate to significant reason to outsource

4.7.1.2.1 Evaluation of group differences regarding reasons to outsource

Issue	Banks Tier 1	Banks Tier 2
Flexibility	2.3	3.5



4.7.1.3 Question:

“To what extent would you rate these factors as a reason NOT to outsource?”

“I would be susceptible to outsourcing market place services if the providers are cutting edge” Bank Tier 2

Reason NOT to outsource	Mean
Cost:	3.5
• <i>Operations costs</i>	2.5
• <i>Technology costs</i>	2.6
• <i>Move to variable costing</i>	2.5
Flexibility:	3.5
• <i>Speed of new product processing support</i>	3.0
• <i>Ability to exit markets/products without high restructuring costs</i>	2.9
• <i>Speed of change to support existing products’ new services or features</i>	3.3
Control:	3.4
• <i>Better MIS</i>	3.0
• <i>Clean audits (e.g. internal)</i>	2.8
• <i>Reduction in errors and claims</i>	2.5
Regulatory:	3.4
• <i>Regulatory opinion of your processing ability, e.g. recognition of risk model by regulators</i>	3.6
• <i>Coping with new or changing regulatory demands</i>	3.4
• <i>Dealing with multiple regulatory jurisdictions</i>	3.3
Service levels:	3.3
• <i>Service levels (SLA)</i>	3.3
• <i>Customer service</i>	3.3
• <i>Relationship management</i>	2.9
• <i>Straight through processing (STP)</i>	2.6
Staff:	3.1
• <i>Attracting and retaining high quality and experienced processing staff</i>	2.8
• <i>Attracting and retaining high quality and experienced technology staff</i>	2.8
Strategic partnership:	2.7
• <i>Being in line with other industry participants</i>	2.5
• <i>Keeping up with technology</i>	2.5

Given the variable ways in which participants could respond, e.g. to a heading, a sub-heading or parts of a heading and sub-heading, the major categories above are not necessarily averages of the sub-categories.



4.7.1.4 Question:

“How important is this factor to your business today?”

Business issue	Mean
Cost:	3.5
• <i>Operations costs</i>	3.8
• <i>Technology costs</i>	4.3
• <i>Move to variable costing</i>	2.7
Staff:	3.3
• <i>Attracting and retaining high quality and experienced processing staff</i>	3.3
• <i>Attracting and retaining high quality and experienced technology staff</i>	3.9
Flexibility:	3.3
• <i>Speed of new product processing support</i>	3.6
• <i>Ability to exit markets/products without high restructuring costs</i>	3.5
• <i>Speed of change to support existing products' new services or features</i>	3.8
Service levels:	3.2
• <i>Service levels (SLA)</i>	3.5
• <i>Customer service</i>	3.5
• <i>Relationship management</i>	3.0
• <i>Straight through processing (STP)</i>	3.7
Control:	3.2
• <i>Better MIS</i>	2.8
• <i>Clean audits (e.g. internal)</i>	3.0
• <i>Reduction in errors and claims</i>	3.4
Strategic partnership:	3.1
• <i>Being in line with other industry participants</i>	2.7
• <i>Keeping up with technology</i>	3.9
Regulatory:	3.0
• <i>Regulatory opinion of your processing ability, e.g. recognition of risk model by regulators</i>	3.4
• <i>Coping with new or changing regulatory demands</i>	3.8
• <i>Dealing with multiple regulatory jurisdictions</i>	3.7

Given the variable ways in which participants could respond, e.g. to a heading, a sub-heading or parts of a heading and sub-heading, the major categories above are not necessarily averages of the sub-categories.

★ *Group Differences* ★

4.7.1.5 Significant differences between groups: Banks (Tier 1 and 2) versus all others

- ◆ Banks (Tier 1 and 2) evaluated service level agreements as a moderately significant business issue, in comparison to all others who evaluated service level agreements as a significant to very significant business issue;
- ◆ Banks (Tier 1 and 2) evaluated customer service levels as a somewhat to moderately significant business issue, in comparison to all others who evaluated customer service levels as a significant to very significant business issue;
- ◆ Banks (Tier 1 and 2) evaluated clean audits as a somewhat to moderately significant business issue, in comparison to all others, who evaluated clean audits as a moderately significant to significant business issue;
- ◆ Banks (Tier 1 and 2) evaluated reducing errors and claims as a moderately significant to significant business issue in comparison to all others who evaluated reduction in errors and claims as a significant to very significant business issue;
- ◆ Banks (Tier 1 and 2) evaluated attracting and retaining high quality processing staff as a moderately significant to significant business issue in comparison to all others all others who evaluated attracting and retaining high quality processing staff as a significant to very significant issue.

4.7.1.5.1 Evaluation of group differences regarding significant business issues

Issue	Banks Tier 1 and 2	All others
Service levels: service level agreements	3.0	4.4
Service levels: customer service	2.7	4.4
Control: clean audits	2.3	3.8
Control: reduction in errors and claims	2.6	4.3
Staff	2.8	4.2



★ *Group Differences* ★

4.7.1.6 Significant differences between groups: Banks Tier 1 versus Banks Tier 2

- ◆ Banks Tier 1 evaluated flexibility as a relatively insignificant reason to outsource (mean = 2.3), in comparison to Banks Tier 2, who evaluated flexibility as a moderate to significant reason to outsource (mean = 3.5).

4.7.1.6.1 Evaluation of group differences regarding significant business issues

Issue	Banks Tier 1	Banks Tier 2
Flexibility	2.3	3.5



4.8 Assessment of potential suppliers

4.8.1 Participants' own operations departments

4.8.1.1 Question:

“How do you rate your own operations department, now and in the future, as a supplier of processing services?”

Evaluation	(Mean)
Now	3.4
In the future	4.3

Participants rated their own operations department on a scale of 1 to 5, where 1 = low and 5 = high

4.8.1.2 Question:

“Have you considered using your own derivatives processing capacity to provide these services to others?”

Response	(Percentage)
Yes we have	39
We may consider it in future	24
No we have not	37



4.8.1.3 Question:

“How would you rate these organisations as a supplier of processing services both now and in the future?”

“I would not be keen to allow any financial institution to see our positions – they are very sensitive” Corporate

Potential supplier	Evaluation now Mean	Evaluation in the future Mean
A. Securities outsourcers:	2.5	3.0
<i>Bear Stearns</i>	2.9	3.4
<i>Pershing</i>	2.4	2.9
<i>Other [Companies mentioned were: Societe General, FIMAT]</i>	3.1	3.4
B. Derivative Houses:	3.5	3.7
<i>CSFB</i>	3.5	3.8
<i>JP Morgan</i>	3.7	3.8
<i>UBS</i>	3.0	3.6
<i>Morgan Stanley</i>	3.6	4.1
<i>Citigroup</i>	3.1	3.4
<i>Deutsche Bank (Bankers Trust)</i>	3.2	3.7
<i>HSBC</i>	2.9	3.2
<i>Other [Companies mentioned were: Chase Manhattan, Merrill Lynch, Credit Lyonnais, Goldman Sachs, First Chicago, BNP, Bank of New York, State Street Bank]</i>	3.3	3.7
C. Major Outsourcing Companies:	2.4	2.6
<i>EDS</i>	2.6	3.2
<i>Andersen Consulting</i>	2.4	3.0
<i>Perot Systems</i>	2.3	2.9
<i>Other [Companies mentioned were: PriceWaterhouseCoopers, Cap Gemini, Ernst and Young, EBS/Minex]</i>	2.0	2.9
D. Software Suppliers:	2.0	2.3
<i>Summit</i>	2.7	3.0
<i>Other [Companies mentioned were: ACT, Sungard, Rolfe and Nolan]</i>	2.6	3.5
E. Market Intermediaries:	2.6	3.1
<i>Swapclear</i>	3.0	3.8
<i>Other [Companies mentioned were: Londex, Eurex, Cedex]</i>	2.5	3.5

Given the variable ways in which participants could respond, e.g. to a heading, a sub-heading or parts of a heading and sub-heading, the major categories above are not necessarily averages of the sub-categories.

Participants rated organisations on a scale of 1 to 5, where 1 = low and 5 = high



4.8.1.4 Question:

“Would you consider outsourcing to these organisations in the future?”

Potential supplier	(Percentage)
A. Securities outsourcers:	28
<i>Bear Stearns</i>	26
<i>Pershing</i>	5
<i>[Companies mentioned were: Societe General, FIMAT]</i>	22
B. Derivative Houses:	36
<i>CSFB</i>	35
<i>JP Morgan</i>	33
<i>UBS</i>	32
<i>Morgan Stanley</i>	45
<i>Citigroup</i>	26
<i>Deutsche Bank (Bankers Trust)</i>	37
<i>HSBC</i>	20
<i>Other [Companies mentioned were: Chase Manhattan, Merrill Lynch, Credit Lyonnais, Goldman Sachs, First Chicago, BNP, Bank of New York, State Street Bank]</i>	42
C. Major Outsourcing Companies:	8
<i>EDS</i>	7
<i>Andersen Consulting</i>	7
<i>Perot Systems</i>	8
<i>Other [Companies mentioned were: PriceWaterhouseCoopers, Cap Gemini, Ernst and Young, EBS/Minex]</i>	14
D. Software Suppliers:	10
<i>Summit</i>	20
<i>Other [Companies mentioned were: ACT, Sungard, Rolfe and Nolan]</i>	9
E. Market Intermediaries:	19
<i>Swapclear</i>	21
<i>Other [Companies mentioned were: Londex, Eurex, Cedex] (Participants believe other market intermediaries may come into play in the next 5 years and will consider working with them then)</i>	60



★ *Group Differences* ★

4.8.1.5 Significant Differences between groups: Banks (Tier 1 and 2) versus all others

- ◆ Banks (Tier 1 and 2) evaluated major outsourcing companies as moderately credible to credible, in comparison to all others who evaluated major outsourcing companies as low to moderate credibility;
- ◆ Banks (Tier 1 and 2) evaluated HSBC as a moderately credible to credible supplier, in comparison to all others who evaluated HSBC as a moderately credible to credible supplier.

4.8.1.5.1 Evaluation of group differences regarding alternative outsourcing providers

Issue	Banks Tier 1 and 2	All others
Evaluation of major outsourcing providers now	2.8	1.8
Evaluation of HSBC now	2.7	3.8



5. METHODOLOGY AND APPROACH

5.1 Objectives of the study

The principal objective of the Market Survey was to ascertain key factors in OTC derivative processing services. OTC derivative processing includes mainline processing and reporting for the range, from vanilla to exotic, of:

- ◆ interest rate swaps and options;
- ◆ foreign exchange (FX) swaps and options;
- ◆ equity-based swaps and options.

In addition, the potential market includes support of hedge trading activity for domestic bonds and FX spot and forwards.

The aims of the Market Survey included:

- ◆ an assessment of the size of the market measured as gross expenditure on operations and operations technology and that portion of the market, which might be amenable to outsourcing;
- ◆ reporting on the reactions to outsourcing as a ‘Concept’, delineating those who: are considering outsourcing now; might in the future; outsource anything currently; will not outsource;
- ◆ the identification of key factors which have made and will make prospective clients outsource their OTC derivative processing;
- ◆ providing an assessment of the suppliers, both real and future as perceived by the participants.

5.2 How the study was conducted

5.2.1 The Market Survey included:

- ◆ a thorough review of the available research and publications, “literature survey and market research” including:
 - published articles, press releases and trade literature;
 - web sites of journals, academic institutions, and competitor organisations;
 - web sites, articles and press releases from regulatory authorities;
- ◆ a series of 53 interviews, either face-to-face or telephone, lasting on average 54 minutes. 41 interviews were with potential purchasers of OTC derivative processing services;
- ◆ 65 informal soundings with organisations that were not appropriate for full interview but which Z/Yen felt would have a relevant contribution to make. Some of the wider sources of information included:
 - banking software suppliers;
 - academics from business;
 - various trade journalists and trade associations such as the Futures and Options Association.



5.2.2 The 53 interviews consisted of a range of questions. Some were quick and factual and others were more open ended, giving the participants the chance to voice opinions. The interview was structured in 5 main sections, looking at:

- ◆ participants' and their organisations' perceptions of outsourcing;
- ◆ products traded by the organisation;
- ◆ services provided by the organisation;
- ◆ major business issues and factors;
- ◆ assessments of potential suppliers.

5.2.3 The interviews were conducted by four senior individuals capable of discussing OTC derivative processing with potential senior purchasers. Interviewers cross-accompanied each other to a selection of interviews for peer review and consistency control. Comments were non-attributable. Participants were told that the interview should take no more than an hour of their time.

5.2.4 All of the interviews were processed in SPSS, a statistical package widely used in processing surveys. Each interview resulted in over 600 entries (over 30,000 data points). The results from the interviews were analysed to determine whether there was a significant difference between the responses of different groups of participants. A list of participating organisations in each group is in Section 3. Statistically important differences between the groups were sought by contrasting:

- ◆ Banks (Tier 1 and Tier 2) versus others;
- ◆ Banks Tier 1 versus Banks Tier 2;
- ◆ Banks Tier 1 versus Banks Tier 2 versus Fund Managers/Hedge Funds.

5.2.5 Overall market size information was estimated by combining three types of information: data from a survey by the Bank of England and the Bank of International Settlements which lists the total value of all transactions by OTC instrument; various estimates of average contract size, typical contract and estimated processing cost derived from software suppliers, regulators; and a Treasury transaction cost study conducted a few years ago by Z/Yen people.

5.3 Acknowledgements

We received enthusiastic co-operation from everyone involved in this market survey. We would particularly like to thank all of the interview subjects for their participation.

From our wider Z/Yen network we would like to express our appreciation to Paul Cattermull, Cathy Dyson, Dr Jacqueline Goldberg, Ian Harris, Alan Leale-Green, Marie Logan, Robert Pay and Dr Kevin Parker.



APPENDIX A BACKGROUND TO Z/YEN



Z/Yen – An Introduction

Z/Yen's mission is to be the foremost risk/reward management firm. Risk/reward management is the application of risk analysis and return incentives to strategic, systems, human and organisational problems in order to improve performance. Z/Yen believes that the intelligent management of risk is the basis of significant reward. By recognising, understanding and managing risks, more risks can be assumed and performance increased. Z/Yen applies risk/reward management in the public, private and not-for-profit sectors in areas as diverse as finance, information technology, human resources, research and development, environment, quality, sales and marketing.

Z/Yen's slogan is "zest for enlightenment", embodied in five distinguishing principles:

- ◆ investing in clients;
- ◆ investing in partners;
- ◆ improving ourselves;
- ◆ retaining and developing innovation and humour;
- ◆ sharing the rewards.

Z/Yen has developed a risk/reward methodology based on analytical techniques from a number of fields which manage risk. The methodology consists of a strategic framework, supporting software, procedures, case studies and report formats. The methodology has been applied to strategic planning, financial planning, information technology planning, marketing plans, fraud investigations, reserves analysis, systems reviews, cost-effectiveness studies and human resource planning.

Z/Yen's strategy is based on three approaches:

- ◆ enhancement of the risk/reward methodology;
- ◆ management consultancy projects to identify ventures;
- ◆ development of a partner network.

Z/Yen organises its work in projects with a specific proposal for each phase and strong project management. Z/Yen is committed to sharing the risks and benefits of work with clients, often in the form of performance-related fees, and measuring work in quantitative or qualitative terms. Z/Yen has access to venture capital and, where appropriate, can provide a combination of financial and advisory services in exchange for equity or other stakes.

Z/Yen applies its techniques with confidence in a variety of areas, but has stronger experience in technology, insurance, banking, media, health, distribution, charities and business to business services. The firm is headquartered in London, but Z/Yen is committed to the 'virtual office' concept and is an intense user of technology in order to improve flexibility and benefit staff. Z/Yen has two working founders, over ten staff and more than 50 associates. Staff share significantly in the benefits of success and Z/Yen seeks to develop a supportive environment in which professionals from a variety of disciplines can flourish.



Z/Yen in Banking

Banking is an industry where risk and reward are clearly present in day-to-day decisions. As the leading risk/reward management firm, Z/Yen is ideally suited to helping banks make decisions in the areas of strategy, systems, people and organisation. Z/Yen's proprietary risk/reward methodology is not only culturally suited to the banking industry, but unifies banks' strategies from the boardroom to the trading floor, from headquarters to the counter/ATM, from central office to the customer call centre.

Z/Yen's work spans investment banking, retail banking, building societies, mutuals, larger financial services organisations' credit card companies, central financial exchanges, financial information and financial system providers, including 'front', 'back', 'middle', 'sell-side' or 'buy-side'. The type of work ranges from strategic planning, through information systems planning, transaction costing, market segmentation, new electronic market simulations, queuing models for counters, correspondent banking restructuring, computer systems installation, management information systems design, new product/Internet product design and outsourcing. For instance, working with one large investment bank, Z/Yen conducted an intensive risk review leading not only to changes in the financial risk management procedures, but also in a renewed emphasis on operational risks and the costs associated with transactions. The new focus on operational risk led to a large quantitative simulation study on transaction costs which highlighted major flaws in corporate strategy which had been based on erroneous information and customs developed over many years. The bank quickly cut costs amounting to nearly 15% and jumped markedly in profitability.

One larger case, which brought together the many elements of the bank beneath a risk/reward strategy, was the assistance Z/Yen gave a large mutual moving to banking status. Z/Yen's involvement began with a strategic review of preparation and led to the development of a complete plan for the transition. Z/Yen later became involved in rationalising the balance between domestic and money market operations including the development of a strategy for captive insurance, risk management of money market operations and a review of the commercial credit risk. Z/Yen later became involved in formulating a response to regulatory issues and helped operationally with the development of a complete outsourcing strategy, including the relationship with back-office processing through competition. Throughout, Z/Yen was used in monitoring and controlling the implementation of strategy.

Z/Yen participates actively in organisations which are attempting to expand the boundaries of financial research, for example the Centre for the Study of Financial Innovation. Z/Yen was the founder and concept developer of a £1.9 million joint research initiative, The Financial Laboratory, which won a 1996 DTI Foresight Challenge award.

Banks cannot afford to stand still in a competitive market. With telco's, retailers and others threatening disintermediation, a robust risk/reward response is vital. Z/Yen is the natural partner for banks seeking positive changes in response to their environment.