

**Cathay Financial LLC**  
**Survey of Market Data Services**  
**London Office**  
**March 2000**

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## I. Introduction

The purpose of this analysis is to determine an appropriate market data service for Cathay's London office that is expected to begin operation in April. Cathay has requested Openet to survey market data services in terms of cost, features and functionality. This analysis examines the existing market data that Cathay currently has in place as well as considers alternative services that are also in line with Cathay's business objectives. Cathay's criterion for the market data vendor that is selected must provide the following:

- Utilization of **one** data feed for New York and London offices.
- Access to domestic and foreign exchanges, London, Paris and Frankfurt.
- Provision of Dynamic Data Exchange ("DDE") links so that data can automatically link to Microsoft Excel spreadsheets in New York and London.
- Access to domestic and international equities and options: quotes, news, analytics.

## **II. Market Data Vendors**

### **1. Bloomberg**

Bloomberg has proven to set the industry standard for market data and trading systems in terms of breadth and depth of coverage, accuracy and reliability.

Bloomberg's global database consists of over 3 million securities and supports over 4,000 applications. Bloomberg's company financial database contains current and historical fundamental data for 91 countries, over 25,000 companies and 435 industry sectors. Bloomberg covers the gamut of financial instruments: government bonds, corporate bonds, mortgage-backed securities, money markets, municipals, preferreds, equities, commodities, indices, currencies and derivatives. Bloomberg's equity database contains current and historical data for 125 exchanges and over 300,000 issuers.

There are four basic components that comprise a "Total Bloomberg Solution":

1. Open Bloomberg

Open Bloomberg is the core Bloomberg product that combines security market data, analytics, news, research, pricing information and email into one information system.

2. The Bloomberg Order Management and Trading System ("OMTS")

This is an additional level of functionality offered to qualifying clients.

3. Tradebook

Tradebook is Bloomberg's Electronic Communications Network ("ECN") that offers a cost-effective alternative to other ECN's while providing additional liquidity within the NASDAQ market.

4. Additional Client Connectivity Products

Bloomberg offers an additional suite of products that facilitate communications between market makers on Bloomberg. These include Indications of Interest ("IOI"), Advertisements, Order Routing, and Execution Reports.

Bloomberg is a leader in electronic execution and connectivity ranging from back office feeds, Custody feeds, links to issuing paying agents, reporting links from Bloomberg trading system clients and most recently, equity order management.

There are no incremental costs to access to these products. The Bloomberg trading system is offered to clients that meet the terminal requirements of one terminal for every person committing capital. The reduced cost for Bloomberg terminals will incorporate the offsetting of all monthly savings. These savings come from the redirection of ECN volume to Tradebook as well as the replacement of current vendor services. For trade volume over 3 million shares, the savings is \$0.005 per share for each share over 3 million.

The majority of Bloomberg users access the data through Microsoft Excel which is a popular tool for calculating, scoring and monitoring security prices. Pricelink for Excel allows traders to select stock prices for live contribution to the Bloomberg. The selected prices will automatically be transmitted to Bloomberg whenever they change, making them available to all authorized Bloomberg users. Real time and static information, historical pricing, yields, volume, dividend history, option chains and company descriptions are data that can all be downloaded. Bloomberg has also created Wizards to allow users to download data quickly with no prior excel experience necessary.

Bloomberg does not provide a detailed listing of all its market data items and features, as the list is quite extensive and analytics are added and upgraded almost daily. The following chart highlights Bloomberg's features.

**BLOOMBERG - MARKET DATA FEATURES****NEWS**

Bloomberg News: 1992 to present  
Over 100 News Contributors  
Bloomberg  
Business Wire  
Dow Jones  
PR News Wire  
United Press International

**RESEARCH**

Analyst Commentaries  
Corporate Acton Database  
Executive Interviews  
First Call  
IPO/Secondary Offerings Report  
Morning Call Notes  
Wall Street Research

**COMPARATIVE/RELATIVE ANALYSIS**

1,300 fundamental and Technical Data Items  
Custom Indices  
Portfolio Analysis

**CHARTING/TECHNICAL ANALYSIS**

Historical Equity Charts  
Prices from 1980  
Equity Historical Technical Indicators  
Short Interest

**FUNDAMENTAL ANALYSIS**

Analyst Coverage and Recommendations  
Business Directory of Management & Directors  
Comparative Reporting  
Earnings Estimates from I/B/E/S, Nelson and Zacks  
EDGAR Filings  
Financial Statement Database  
Financial Trend Analysis  
Fundamental Graphs  
Historical Dividends  
Historical Earnings  
Nelson's  
S&P Market Scope

**ANALYTICS**

Company Descriptive Information  
Company Profiles, Quotes and Recaps  
Equity Holdings  
Company Fundamentals and Earnings  
Hedge/risk Analysis  
Historical Prices/Yields  
Historical Technicals/Charts  
Holdings for Over 1,400 Publically Filed Portfolios  
Industry Group Performance Ranking  
Intraday Technicals/Graphics  
Issuer information/Analysis  
Options Analysis  
Options, Warrants and Convertibles  
Relative Value/Strip Analysis  
Repo Analysis  
Search Capabilities on Fundamental/Technical Data  
Security Valuation and Cash Flow  
Today's Markets  
Total Return Analysis  
Yield and OAS Analysis

**TRADING**

ADR Arbitrage Monitor  
Bloomberg TRADEBOOK  
Currency Monitoring  
Customized Monitoring  
Dynamic Alert Capabilities  
Most-Active Stock Screens  
NASDAQ Level II  
Times and Sales: 30 Days of History  
Volume Weighted Average Pricing

**OPTIONS/WARRANTS**

Custom Option Series Monitoring  
Exotic-Option Valuation Models  
Historical Implied Volatilities  
Real Time Monitoring of all Option Prices  
Scenario Analysis  
Volatility Analysis

**CONVERTIBLES**

Descriptive Information  
Premium/Discount Analysis  
Two-Factor Valuation Model  
Worldwide Search Capability

**WORLDWIDE FUNDS**

Morningstar U.S. Fund Reports  
Mutual Fund Portfolio Holdings  
Performance Search Capabilities  
Premium/Discount Analysis for Closed-End Funds  
Worldwide Mutual Fund Description Database

## **2. Bridge**

Bridge, together with Telerate, is the largest market data and news organization in North America. Bridge is comprised of eleven subdivisions: Bridge Trading Company ("BTC"), Bridge.com, Bridge/CRB, BridgeNews, FutureSource, I-Net Bridge, SAVVIS Communications, StockVal, Telerate, The DAIS Group and Wall Street On Demand. Bridge delivers news, financial data and analytics for over 1.7 million securities to 250,000 users in 60 countries. Bridge's database covers 250 exchanges and offers 15,000 analytics, 20 data applications and 450 leading third party news sources. Bridge News has 600 journalists in 100 bureaus worldwide. Through SAVVIS Communications, Bridge is a world leader in high speed Internet access services. Bridge products are built on a common infrastructure that utilizes a proprietary state-of-the-art global communications network, advanced workstations, digital datafeeds, DDE Links, open Application Programming Interface's ("API") and web browser applications. Using UNIX, Solaris, Windows NT and Java operating systems, Bridge technology leverages proven architecture and standards to bring users a powerful system.

Bridge owns and operates one the world's largest Internet Protocol ("IP") networks. Through Bridge Network and SAVVIS Communications, a leading Internet communications company, Bridge offers its customers secure, high-speed, broadband communications in over 40 countries.

Bridge offers fully managed Internet security solutions. Data and messages are integrated into a network environment via Internet, Intranet, Virtual Private Networks ("VPN") and satellite solutions. Bridge's added value services include web hosting, customer site support and 24-hour call center facilities. Users can receive financial information content with the core Internet Service Provider ("ISP") services. VPN services provide secure message routing links and have been rated the best value on the Internet, with virtually limitless capacity.

Through Bridge's trading and transaction services, Bridge users can route orders, investigate order activity, advertise or execute trades through Bridge's full service trading company, BTC. BTC also offers access to top execution and transaction support, provides institutions with access to one of the largest broker-neutral networks and is a member of the major international stock exchanges.

Equity traders use Bridge's trading executions with the option of soft dollar payment for Bridge information. Through strategic partnerships, Bridge also has access to real-time, interactive, online trade execution and communications services for bonds and foreign exchange. As a result, Bridge has been able to integrate with over fifty datafeeds.

Bridge Trading Company ("BTC") trades stocks for financial institutions who use Bridge products and can pay their bill with equity commission dollars. Over 500 institutional clients execute trades with BTC daily. Based in St. Louis with regional trading offices in Chicago, London, Tokyo, and Hong Kong, BTC's average trading volume is 12 million shares per day.

Proprietary transaction service enables institutions to tap into pools of liquidity, crossing networks and intra-day matching systems. Transactions system allocations such as Institutional Order Entry ("IOE"), trading communications and order processing systems such as Electronic Order Module ("EOM") and TRIAD all provide a competitive trading advantage.

BRIDGE Professional Services focuses solely on developments and integration solutions for clients incorporating BRIDGE products within their own infrastructure. Bridge currently leverages proprietary and industry standard technologies such as Bridgefeed, Bridge Trading Room System, BridgeStation and Bridge Workstation.

The following chart summarizes Bridge's market data services.



**BRIDGE - MARKET DATA FEATURES****NEWS**

Bridge News Financial Markets  
BridgeNews Commodity Markets  
BridgeNews Live Wire  
BridgeNews Overview

**NEWS FEATURES**

BridgeNew Number  
BridgeNewsAlerts  
BridgeNewsNow  
BridgeTopNewsNow  
BridgeNewsFocus  
BridgeNews Daily E-Mail  
BridgeNews Topic 500  
BridgeNewsLinks  
BridgeNewsOpinion

**450 ADDITIONAL NEWS/RESEARCH SOURCES**

FirstCall  
PR Newswire  
Kyodo  
Dow Jones  
Market News (MNSI)  
Business Wire  
AFX  
Reuters

**EQUITIES**

Comprehensive, detailed coverage  
Global markets  
Emerging markets  
Analytics  
Fundamental data  
Level II market maker information  
Market depth  
Options prices

**FIXED INCOME**

Bond price database.  
Government benchmarks  
Corporates  
Mortgages  
Asset backed Securities  
Municipals  
News  
Prices  
Analytics

**FOREIGN EXCHANGE/MONEY MARKETS**

Over 150 major banks contribute real time prices on major, minor and exotic currencies.  
Product pricing includes:  
Spot, cross, forwards  
Deposits  
FRAs  
FXAs  
Swaps  
Interest rate caps  
Currency options.

**COMMODITIES**

Commodity news  
Real time futures and options for all major commodity and energy exchanges  
Agriculturals  
Energy markets  
Supply, Demand and Trade data of commodities.

**ANALYTICS**

Securities detailed time and sales data  
Market Overviews  
Futures  
Options  
Foreign Exchange  
Indices  
Level II for market makers/Best bid and offer  
Rankings  
Technical Summaries  
Technical Charts  
Corporate Profiles  
Historical and Intra-day Data  
10 years of daily data  
21 days of intra-day tick data

### **3. Reuters**

Reuters Securities 3000 is aimed at the globally oriented portfolio manager. It includes real time data from equity exchanges worldwide plus fundamental, analytical and historical time series data. The Securities 3000 product is packaged with Reuters International News, Reuters NewsYear 2000 (380 days of historical news), Reuters Mail, Reuters Financial Television, and Reuters Web. Reuters sets the standard for comprehensive and accurate news: Reuters employs 1,800 journalists in 145 bureaus, located in 90 countries.

The database includes:

- 15 years Daily Price History, 100,000 equities worldwide
- Index-Related Data, 3,000 histories, 260 major indices
- Five years of Profit & Loss ("P&L") and Balance Sheet Data, 28,000 companies worldwide
- Corporate Action Data, 31,000 companies worldwide
- Macroeconomic Indicators, 80 countries
- Security Prices, 236 exchanges
- Historical Company Fundamental Data
- Historical Dividend and Earnings Data
- Consensus Forecasts
- Equities/Indices
- Equity Options
- Index Options/Futures
- Warrants/Convertibles
- Corporate Bonds

Reuters' "Open Access" facility is an integral feature that enables the user to retrieve data and insert it into spreadsheets and other applications. Reuters has specifically included an add-in for Excel users to extract historical and reference data. For access to relationship databases versus real time, Open Database Connectivity ("ODBC") is the standard that was developed by Microsoft to access multiple relational databases without having to write dedicated software for each database. Reuters' Open Access uses the ODBC standard to provide a well-defined application-programming interface. The adoption of ODBC standard ensures that clients can gain immediate benefit from off-the-shelf tools.

Reuters 3000 also includes an add-in for Excel that provides a familiar wizard-style interface to simplify the process of submitting requests. This enables users to build lists of securities and use them as the basis for requesting historical information over a given date range. Therefore, Reuters can dynamically link real-time data to spreadsheet calculations for live updates and update reference and historical data. In addition, new applications are created by accessing the Reuters 3000 data through industry standard application programming interfaces.

Reuters Web browser provides access to Reuters Web, a private Intranet for Reuter's users. Reuters Mail is an email service for intra- and inter-firm communications. This service runs on the private Reuters network and is highly cost efficient and secure. Reuters Broker Research delivers research reports from brokerage firms worldwide. Reuters Business Briefing provides fast access to a ten-year database of over 2,000 sources including worldwide publications as well as Reuters news.

Other analytics available on Reuters:

- Ranking Top Equity Gainers/Losers
- Charts
- Limit Alerts
- Custom Quote Lists
- Search Capabilities: company name, geographic market, instrument classification, index membership, market cap, balance sheet items, market ratios.
- P/E Ratios
- Dividend Yields
- Total Return
- Asset/Profitability Ratios
- Technical Charts
- Beta and Regression Analytics
- Volatilities
- Price Relatives

#### **4. TRACK DATA**

Track Data covers over 130,000 securities and provides over 100 news sources. Track's services include option analytics, real-time DDE and API links, user-definable screens and access to the NewsWatch search engine. NewsWatch can be accessed through the Internet or dedicate lines and provides consolidated news tickers, rapid news retrieval, filtering and audible/visual alerting. Track Data's additional features include point and click technology, ability to add inter-day option strikes, dynamic time series and access to fifty different database services.

Track's upgraded MarkeTrack product was launched in 1999 and specializes in US equity and option analytics. It delivers real-time prices for options and stocks from all North American exchanges, NASDAQ Level II and major European and Asian markets. This real time data can be exported into an Excel spreadsheet using Microsoft's DDE links.

Fundamental data is available from Market Guide, Standard & Poor's MarketScope and Zack's. MarkeTrack offers charting capabilities and technical analysis such as moving averages, volatilities, oscillators and Bolinger bands on a daily, weekly, monthly or intra-day basis with historical data spanning 30 years.

While most of the company's UK-based users are following US stocks, Track includes access to data from the London Stock Exchange's Electronic Trading System ("SETS"), an automated execution system and to a fundamental database of UK-focused companies. Track also provides UK-focused intraday and historical charts and news. Lastly, Track has built in formulas for the conversion of local currencies into euro dollars.

The following chart summaries Track's market data features.

**TRACK DATA - MARKET DATA FEATURES**

<b>EXCHANGES</b>	<b>NEWS</b>	<b>DATABASES</b>
Alberta Stock Exchange	AFX	Autex
American Stock Exchange	AP Dow Jones	Bridge Money Center
Amsterdam Stock Exchange	Bridge Commodities News	Bridge Ticker
Baltic Futures Exchange	Bridge Financial News	Bulletin Board - OTC Stocks
Boston Stock Exchange	BusinessWire	Dow Jones 90 Days News Retrieval
Chicago Board of Trade	Comtex	EDGAR
Chicago Board Options Exchange	Dow Jones 90 Day News Retrieval	Enhanced Graphics
Chicago Mercantile Exchange	Dow Jones Markets Report	Investment Insider Trading
Chicago Stock Exchange	Dow Jones News	Investnet
Cincinnati Stock Exchange	Dow Jones World Equity Report	Knight-Ridder Money Center
Coffee, Sugar & Cocoa Exchange	European Corporate Reports	Knight-Ridder Ticker
Commodities Exchange of New York	Exchange News	London Level I
Deutsche Termin Bourse	Extel Financial News	Market Guide
European Options Exchange	Federal Filings	Market-by-Price
Frankfurt Stock Exchange	First Call	NASDAQ Level II
Futures & Options Exchange	First Call International	OTC Bulletin Board
IBIS (Electronic Trading)	Futures World News	Pink Sheets
International Money Market	Knight-Ridder Commodities	S&P Market Scope
International Petroleum Exchange	Knight-Ridder Financial	SEAQ Level II
Kansas Board of Trade	Knight-Ridder Tribune	Spectrum Institutional Holdings
London Commodities Exchange	Kyodo News	Vickers 144 Filings
London International Financial Futures Exchange	Market News	Vickers Institutional Holdings
London Stock Exchange	Market Scope	Zacks
MATIF (Paris Futures/Options)	MMD Viewpoint	
MEFF Renta Fija	Nikkei	
MEFF Renta Variable	Platts Global Alert	
Midamerica Commodities Exchange	PR Newswire	
Minneapolis Grain Exchange	Professional Investor Report	
MONEP	Reuters	
Montreal Stock Exchange	RNS	
NASDAQ	VWD	
New York Cotton Exchange	Wall Street Journal	
New York Futures Exchange	Zacks Earnings Surprises	
New York Mercantile Exchange		
New York Stock Exchange		
OML-Swedish Options (London)		
Osaka Stock Exchange - Equities/Futures		
Pacific Stock Exchange - Equities/Options		
Paris Stock Exchange		
Philadelphia Stock Exchange - Equities/FX		
Singapore International Futures Exchange		
SOFFEX (Swiss Futures/Options)		
Stockholm Stock Exchange		
Swiss Stock Exchange		
Tokyo International Futures Exchange		
Tokyo Stock Exchange - Equities/Futures		
Vancouver Stock Exchange		
Winnipeg Grain Exchange		

**COMPARISON OF OPTIONS/FUTURES WORLDWIDE EXCHANGES FOR REUTERS AND TRACK DATA**

<b>OPTIONS/FUTURES EXCHANGES</b>	<b>REUTERS</b>	<b>TRACK DATA</b>
Amsterdam Agricultural Commodities Exchange	X	
Amsterdam Futures & Options	X	
Amsterdam Indices	X	
Austrian Futures & Options Exchange	X	
Baltic Futures Exchange	X	X
Barcelona MEFF	X	
Belgium Futures & Options Exchange	X	
Bolsa Mercantil de Futuros	X	
Chicago Board of Trade	X	X
Chicago Board Options Exchange	X	X
Chicago Mercantile Exchange	X	X
Coffee, Sugar & Cocoa Exchange	X	X
Commodities Exchange of New York	X	X
Deutsche Termin Bourse	X	X
European Options Exchange	X	X
Futures & Options Exchange	X	X
Hong Kong Futures Exchange	X	
IBIS/XETRA	X	X
International Petroleum Exchange	X	X
Istanbul Stock Exchange	X	
Kansas Board of Trade	X	X
Korean 200 Futures/Index of Options	X	
Korean Futures Exchange	X	
London Commodities Exchange	X	X
London International Financial Futures Exchange	X	X
Madrid CATS	X	
MATIF (Paris Futures/Options)	X	X
MEFF Renta Fija		X
Mexican Derivatives Exchange	X	
Midamerica Commodities Exchange	X	X
Minneapolis Grain Exchange	X	X
MONEP	X	X
New York Cotton Exchange	X	X
New York Futures Exchange	X	X
New York Mercantile Exchange	X	X
OML-Swedish Options (London)		X
Options Price Reporting Authority	X	X
Osaka Stock Exchange - Equities/Futures	X	X
Pacific Stock Exchange - Equities/Options		X
Philadelphia Stock Exchange - Equities/FX	X	X
Rio Brazilian Futures	X	
Singapore International Futures Exchange	X	X
SOFFEX (Swiss Futures/Options)	X	X
Stockholm Options Market	X	
STOXX	X	
Sydney Futures Exchange	X	
Tokyo International Financial Futures Exchange	X	X
Tokyo Stock Exchange - Equities/Futures	X	X
Winnipeg Grain Exchange	X	X

### III. Cost Summary

**Cathay Financial LLC  
Market Data Costs - New York**

Market Data	Trading & Sales	Research	Total Users	Cost/User	Total Cost/Mo.
Bloomberg	7	1	8	\$1,275.00	\$10,200.00
Dow Jones News	12	0	12	\$190.00	\$1,331.00
Federal Filings	12	0	12	\$180.00	\$2,280.00
First Call	12	0	12	\$180.00	\$2,160.00
Reuters News	12	0	12	\$41.00	\$492.00
Reuters	5	0	5	\$315.00	\$1,575.00
Standard & Poor's	0	1	1	\$2,904.17	\$2,904.17
Track Data	13	0	13	\$1,067.77	\$13,880.97
<b>TOTAL PER MONTH</b>					<b>\$34,823.14</b>
<b>TOTAL PER YEAR</b>					<b>\$417,877.68</b>

**Cathay Financial LLC  
Market Data Costs - London**

Market Data	# Users	Cost/User	Monthly Cost	Annual Cost
Bloomberg <sup>(1)</sup>	6	\$1,275.00	\$7,650.00	\$91,800.00
Bridge <sup>(2)</sup>	6	\$983.33	\$5,900.00	\$70,800.00
Reuters <sup>(3)</sup>	6	\$2,233.43	\$13,400.55	\$160,806.64
Track Data <sup>(4)</sup>	6	\$999.98	\$5,999.90	\$71,998.76

<sup>(1)</sup> If trade 3 million+ shares on Bloomberg Tradebook, entitled to one month's free service plus credit of \$0.005\* number of shares >3MM.

<sup>(2)</sup> Includes \$1700 monthly location fee for 2 T1 circuits/2 on site servers. Rate does not include one-time installation charge of \$1,500.

<sup>(3)</sup> Does not include one-time installation charge of \$11,970.

Breakdown of market data cost and communication costs are detailed on the following page.

British pounds converted to US dollars based on 3/20/00 exchange rate: .637511

<sup>(4)</sup> Rate consists of 600 pounds for first user, 485 pounds for 1+ users plus 800 pounds for communication lines.

Does not include one-time installation charge of \$785

British pounds converted to US dollars based on 3/20/00 exchange rate: .637511

## IV. Reuters Cost Detail - London

**Cathay Financial LLC**  
**REUTERS 3000 Xtra**  
**Market Data Costs - London**

<b>Service Costs (Data)</b>	<b># Users</b>	<b>Cost/User</b>	<b>Monthly Cost</b>	<b>Annual Cost</b>	<b>Annual Cost</b>
		£	£	£	US \$
First Workstation	1	1,130.00	1,130.00	13,560.00	\$21,270.22
Additional Workstations	5	800.00	4,000.00	48,000.00	\$75,292.82
Selectserver (1200 RICS)	1	1,860.00	1,860.00	22,320.00	\$35,011.16
Reuters Add Box (For Resilience)	1	320.00	320.00	3,840.00	\$6,023.43
<b>Total</b>		<b>4,110.00</b>	<b>7,310.00</b>	<b>87,720.00</b>	<b>137,597.63</b>
<b>Infrastructure &amp; Communication Costs</b>					
		£	£	£	US \$
Triarch Backbone *	1	581.00	581.00	6,972.00	\$10,936.28
2Mb Session Server Circuit	1	234.00	234.00	2,808.00	\$4,404.63
64K AMS Backlink BT Circuit	2	117.00	234.00	2,808.00	\$4,404.63
1Mb Terrestrial Broadcast Circuit	1	184.00	184.00	2,208.00	\$3,463.47
<b>Total</b>		<b>1,116.00</b>	<b>1,233.00</b>	<b>14,796.00</b>	<b>23,209.01</b>
		<b>GRAND TOTAL</b>	<b>8,543.00</b>	<b>102,516.00</b>	<b>160,806.64</b>
<b>Installation Charge (1x Charge)</b>					
		£	US \$		
Triarch Infrastructure + DACS configuration		3,500.00	\$5,490.10		
2 Mb Session Server Circuit		850.00	\$1,333.31		
64k AMS Backlink BT Circuit * 2		1,580.00	\$2,478.39		
1Mb Terrestrial Broadcast Circuit		500.00	\$784.30		
Kobra Workstations @ £200 each		1,200.00	\$1,882.32		
<b>Total</b>		<b>7,630.00</b>	<b>11,968.42</b>		
<b>Notes</b>					
Payment terms are quarterly in advance by direct debit, following installation.					
Monthly subscription includes maintenance, service, equipment, insurance and training.					
Initial contract period is for two years.					
The prices and other Terms and Conditions for the supply Of Reuters Information Products and Reuters Information Management Systems are independent of each other.					



## V. Exchange Fees

<b>Exchange</b>	<b>Monthly Rate <sup>(1)</sup> (In US Dollars)</b>	<b>Monthly Rate (In European Currency)</b>
New York Stock Exchange	\$31.75 <sup>(2)</sup>	
American Stock Exchange	\$30.20	
NASDAQ Level I	\$20.00	
NASDAQ Level II	\$50.00	
OPRA	\$23.00 <sup>(3)</sup>	
London (SEAO) Domestic Level I	\$22.31	35 GBP
London (SEAO) Domestic Level II	\$95.63	150 GBP <sup>(4)</sup>
London (SEAO) International Level I	\$11.95	18.75 GBP
London (SEAO) International Level II	\$47.81	75 GBP
FTSE & London Indices	\$3.44	5.4 GBP
LIFFE	\$15.94	25 GBP
Frankfurt Stock Exchange	\$19.90	40 DM
EUREX (German Futures)	\$14.93	30 DM
XETRA (German Electronic Market)	\$14.93	30 DM
Paris Bourse	\$29.59	200 FF
MATIF (Paris Futures)	\$14.79	100FF <sup>(5)</sup>
MONEP (Paris Options)	\$14.79	100FF

<sup>(1)</sup> Conversions based on 3/20/00 exchange rates:

GBP: .637511

FF: 6.76

DM: 2.01

<sup>(2)</sup> Rate based on 10-19 users

<sup>(3)</sup> Rate based on 10-29 users

<sup>(4)</sup> Rate includes the SETS order book for FTSE 100 stocks

<sup>(5)</sup> Rate declines to 45 FF for 2+ users

## **VI. Conclusion**

- While it is the most expensive market data vendor, Bloomberg provides the best service in terms of quality, accuracy, depth, breadth and reliability. In addition, should Cathay's utilize Bloomberg's Electronic Communication Network, Tradebook, cost savings will be generated: for trading volume in excess of 3 million shares, Bloomberg provides free service for a month plus savings of \$0.005 per share for each share over the 3 million mark.
- Bridge is, by far, the most economical choice and has in the past year shown a remarkable turnaround in terms of breadth of market data services, sophisticated technology, powerful delivery and vastly improved functionality. The down side to Bridge, is the required learning curve that will be necessary while acclimating to a new system.
- A comparison chart of Reuters versus Track Data is provided to show how extensive Reuters coverage is as far as worldwide options go. Reuters is the better choice for international coverage. The cost for Reuters is high; however, the costs shown are monthly and as users are added to the Reuters network, the cost per user will decline. Currently, the additional cost for one user is 800 British pounds, or \$1,255, on par with Bloomberg.
- Track Data is similar to Bridge on a cost basis and meets all of Cathay's market data requirements. However, Track does not provide a "TradeBook" feature and therefore Cathay would still require a trading execution system to complement its market data service.