
APPENDIX D

**TABLES OF
MARKET PRICE
MOVEMENTS**

TABLE D-1

WEEK OF OCTOBER 5, 1987

U.S. INDEXES

	10/5	10/6	10/7	10/8	10/9
DJIA					
Close	2640.18	2548.63	2551.08	2516.64	2482.21
Change	-0.81	-91.55	+2.45	-34.44	-34.43
%	-0.03	-3.47	+0.10	-1.35	-1.37
S&P 500					
Close	328.08	319.22	318.54	314.16	311.07
Change	+0.01	-8.86	-0.68	-4.38	-3.09
%	0.0	-2.70	-0.21	-1.38	-0.98
NYSE Composite					
Close	183.44	178.98	178.55	176.32	174.64
Change	+0.01	-4.46	-0.43	-2.23	-1.68
%	+0.01	-2.43	-0.24	-1.25	-0.95
Amex Composite					
Close	359.33	355.44	352.55	348.93	346.81
Change	-.04	-3.89	-2.89	-3.62	-2.12
%	-.01	-01.08	-0.81	-1.03	-0.61
NASDAQ Composite					
Close	453.63	447.51	444.64	440.03	438.43
Change	+2.02	-6.12	-2.87	-4.61	-1.60
%	+0.45	-1.35	-0.64	-1.04	-0.36
FOREIGN INDEXES					
London FT-SE 100					
Close	2385.8	2367.9	2359.8	2375.5	2366.5
Change	+3.6	-17.9	-8.1	+15.7	-9.0
%	+0.15	-0.75	-0.34	+0.67	-0.38
Tokyo Nikkei					
Close	26018.3	26089.0	25952.3	26286.8	26338.8
Change	+11.7	+70.7	-136.7	+334.5	+52.0
%	+0.05	+0.27	-0.52	+1.29	+0.20
INDEX FUTURES					
S&P 500					
Index Futures					
(Dec.) ("SPZ")					
Close	330.80	319.85	320.65	315.80	312.20
Change	-0.55	-10.95	+0.80	-4.85	-3.60
%	-0.17	-3.31	+0.25	-1.51	-1.14

TABLE D-2
WEEK OF OCTOBER 12, 1987

U.S. INDEXES

	10/12	10/13	10/14	10/15	10/16
<u>DJIA</u>					
Close	2471.44	2508.16	2412.70	2355.09	2246.74
Change	-10.77	+36.72	-95.46	-57.61	-108.35
%	-0.43	+1.49	-3.81	-2.39	-4.60
<u>S&P 500</u>					
Close	309.39	314.52	305.23	298.08	282.70
Change	-1.68	+5.13	-9.29	-7.15	-15.38
%	-0.54	+1.66	-2.95	-2.34	-5.16
<u>NYSE Composite</u>					
Close	173.52	176.02	171.26	167.45	159.13
Change	-1.12	+2.50	-4.76	-3.81	-8.32
%	-0.64	+1.44	-2.70	-2.22	-4.97
<u>Amex Composite</u>					
Close	343.57	344.62	340.72	335.80	323.55
Change	-3.24	+1.05	-3.90	-4.92	-12.25
%	-0.93	+0.31	-1.13	-1.44	-3.65
<u>NASDAQ Composite</u>					
Close	433.04	434.81	428.28	422.51	406.33
Change	-5.39	+1.77	-6.53	-5.77	-16.18
%	-1.23	+0.41	-1.50	-1.35	-3.83

FOREIGN INDEXES

<u>London FT-SE 100</u>					
Close	2338.5	2350.2	2322.9	2301.9	
Change	-28.0	+11.7	-27.3	-21.0	closed
%	-1.18	+0.50	-1.16	-0.90	
<u>Tokyo Nikkei</u>					
Close	26284.6	26400.6	26646.4	26428.2	26366.7
Change	-54.1	+116.0	+245.8	-218.2	-61.5
%	-0.21	+0.44	+0.93	-0.82	-0.23

INDEX FUTURES

<u>S&P 500</u>					
Index Futures					
(Dec.) ("SPZ")					
Close	311.60	315.65	305.00	298.25	282.25
Change	-0.60	+4.05	-10.65	-6.75	-16.00
%	-0.19	+1.30	-3.37	-2.21	-5.36

TABLE D-3
WEEK OF OCTOBER 19, 1987

U.S. INDEXES

	10/19	10/20	10/21	10/22	10/23
<u>DJIA</u>					
Close	1738.41	1841.01	2027.85	1950.43	1950.76
Change	-508.32	+102.27	+186.84	-77.42	+0.33
%	-22.62	+5.88	+10.15	-3.82	+0.02
<u>S&P 500</u>					
Close	225.06	236.83	258.38	248.25	248.22
Change	-57.64	+11.99	+21.55	-10.14	-0.03
%	-20.39	+5.33	+9.10	-3.92	-0.12
<u>NYSE Composite</u>					
Close	128.62	133.04	145.02	139.45	139.22
Change	-30.51	+4.69	+11.98	-5.57	-0.23
%	-19.17	+3.65	+9.00	-3.84	-0.16
<u>Amex Composite</u>					
Close	282.50	258.16	281.97	269.02	264.21
Change	-41.05	-24.34	+23.81	-12.95	-4.81
%	-12.69	-8.62	+9.22	-4.59	-1.79
<u>NASDAQ Composite</u>					
Close	360.21	327.79	351.86	336.13	328.45
Change	-46.12	-32.42	+24.07	-15.73	-7.68
%	-11.35	-9.00	+7.34	-4.47	-2.28

FOREIGN INDEXES

<u>London FT-SE 100</u>					
Close	2052.3	1801.6	1943.8	1833.1	1795.2
Change	-249.60	-250.7	+142.2	-110.7	-38.0
%	-10.84	-12.22	+7.89	-5.70	-2.07
<u>Tokyo Nikkei</u>					
Close	25746.6	21910.1	23947.4	24404.4	23201.2
Change	-620.2	-3836.5	+2037.3	+457.0	-1203.2
%	-2.35	-14.90	+9.30	+1.91	-4.93

INDEX FUTURES

<u>S&P 500</u>					
<u>Index Futures</u>					
<u>(Dec.) ("SPZ")</u>					
Close	201.50	216.25	258.25	244.50	241.00
Change	-80.75	+14.75	+42.00	-13.75	-3.50
%	-28.61	+7.32	+19.42	-5.32	-1.43

**TABLES OF
ARBITRAGE
ACTIVITY**

TABLE D-4
COMPARISON OF ARBITRAGE LONG SELLS/SHORT SELLS

<u>Date</u>	<u>Total Arbitrage Stock Sales (Million of Shares)</u>	<u>No. of Programs</u>	<u>Arbitrage Short Sales (Million of Shares)</u>	<u>No. of Programs</u>	<u>% of Arbitrage Shares Sold</u>
OCT. 6	16.2	72	0.8	2	4.9%
OCT. 14	27.4	103	5.9	19	21.6%
OCT. 15	15.8	66	4.1	11	26.0%
OCT. 16	37.2	115	5.4	12	14.6%
OCT. 19	37.6	120	9.4	27	25.1%
OCT. 20	3.3	23	1.3	8	37.6%

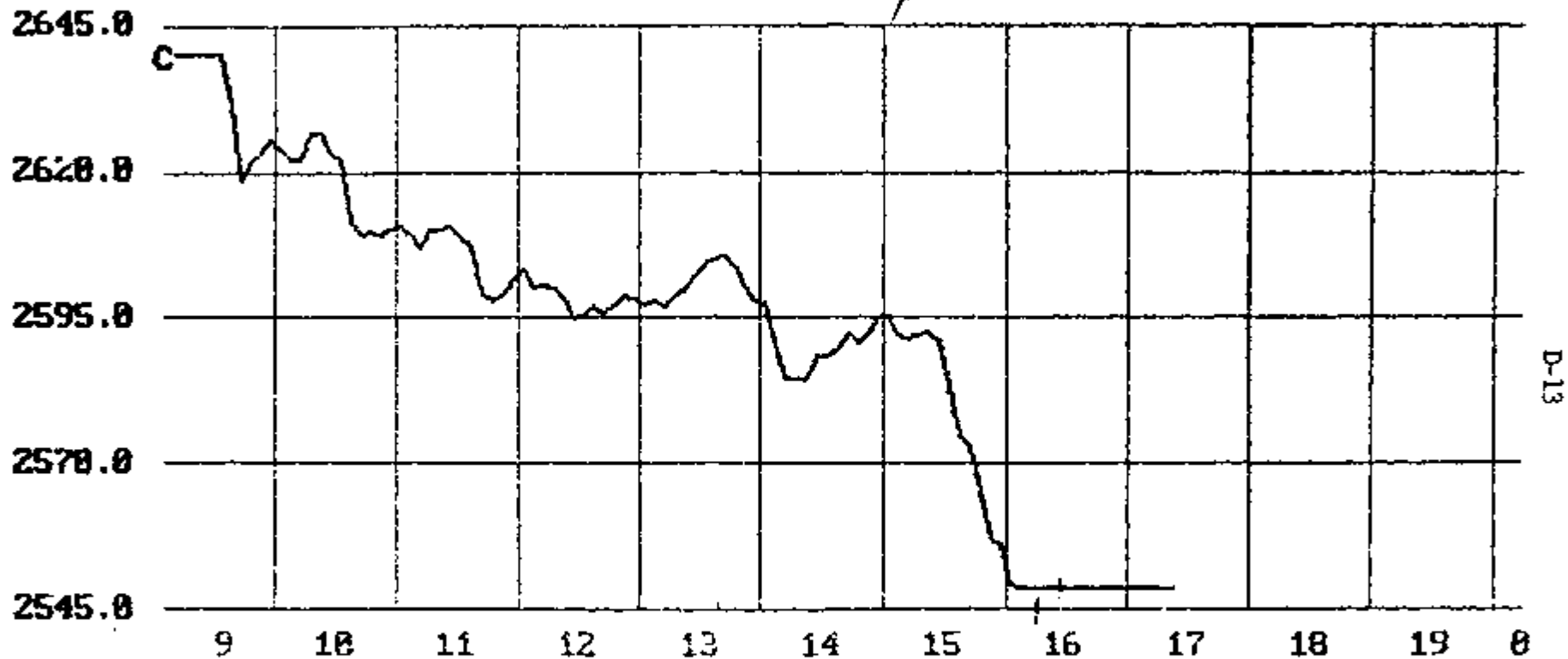
TABLE D-5
COMPARISON OF PROPRIETARY/CUSTOMER SELL ARBITRAGE

<u>Date</u>	<u>Total Arbitrage Stock Sales (Millions of Shares)</u>	<u>No. of Programs</u>	<u>Customer Arbitrage ^{*/} Sales (Millions of Shares)</u>	<u>No. of Programs</u>	<u>% of Shares Sold</u>
OCT. 6	16.2	72	2.4	19	15.0%
OCT. 14	27.4	103	13.4	27	49.0%
OCT. 15	15.8	66	3.9	10	24.7%
OCT. 16	37.2	115	18.5	41	49.6%
OCT. 19	37.6	120	19.1	46	50.7%
OCT. 20	3.3	23	0.9	3	26.0%

^{*/} Includes index substitution

OCTOBER 6

DOW JONES INDUSTRIAL AVERAGE

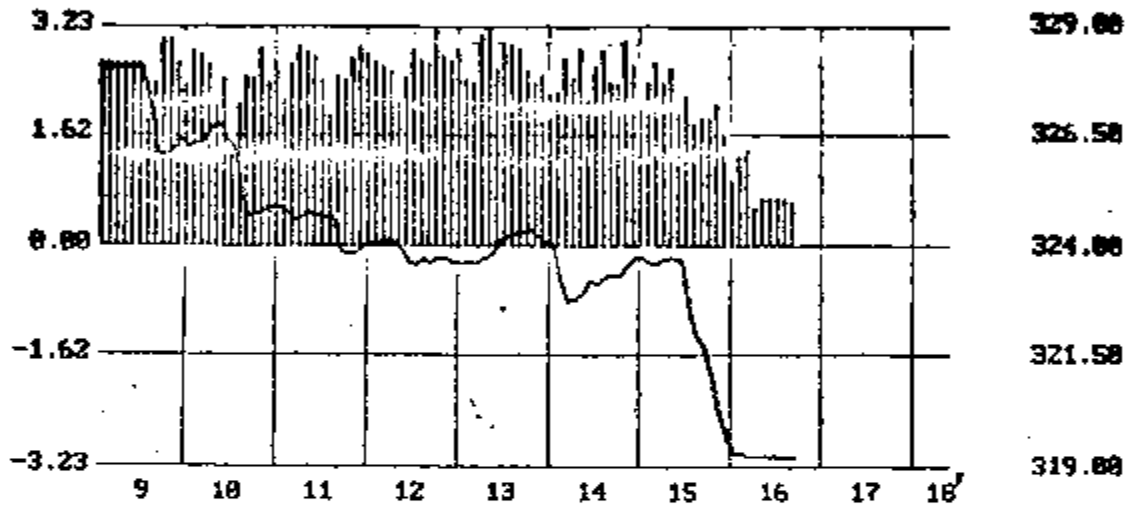


D-13

TRADE DATE: OCTOBER 6, 1987

FOUR-MINUTE DATA

SOURCE: BRIDGE INFORMATION SERVICES, INC.



TRADE DATE: OCTOBER 6, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SP2"
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE

October 6, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	26.2	18.7	1.7	0	0	0.3	2.0	7.6	10.7
10:00-10:30	14.1	9.9	1.4	0	0	0	1.4	9.9	14.1
10:30-11:00	18.0	13.2	1.6	0	0	0.2	1.9	10.6	14.3
11:00-11:30	11.5	7.8	0.7	0	0	0	0.8	7.0	10.3
11:30-12:00	11.3	7.9	0.6	0	0	0	0.6	5.3	7.6
12:00-12:30	9.5	6.8	0.2	0	0	.06	0.2	2.1	2.9
12:30-1:00	7.2	5.0	0	0	0	0	0	0	0
1:00-1:30	7.4	5.2	.09	0	0	0	.08	1.2	1.7
1:30-2:00	6.5	4.5	0	0	0	0	0	0	0
2:00-2:30	12.1	8.6	1.2	0	0	0.7	1.9	15.7	22.1
2:30-3:00	8.6	5.8	0.5	0	0	0	0.5	5.8	8.6
3:00-3:30	11.0	8.4	0.5	0	0	0	0.5	2.7	3.6
3:30-Close	31.7	25.6	7.7	0	0	2.8	10.5	33.1	41.0
ALL DAY			0.2	0	0	0	0.2		
TOTAL	175.1	127.7	16.1	0	0	4.2	20.3	11.6	15.9

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

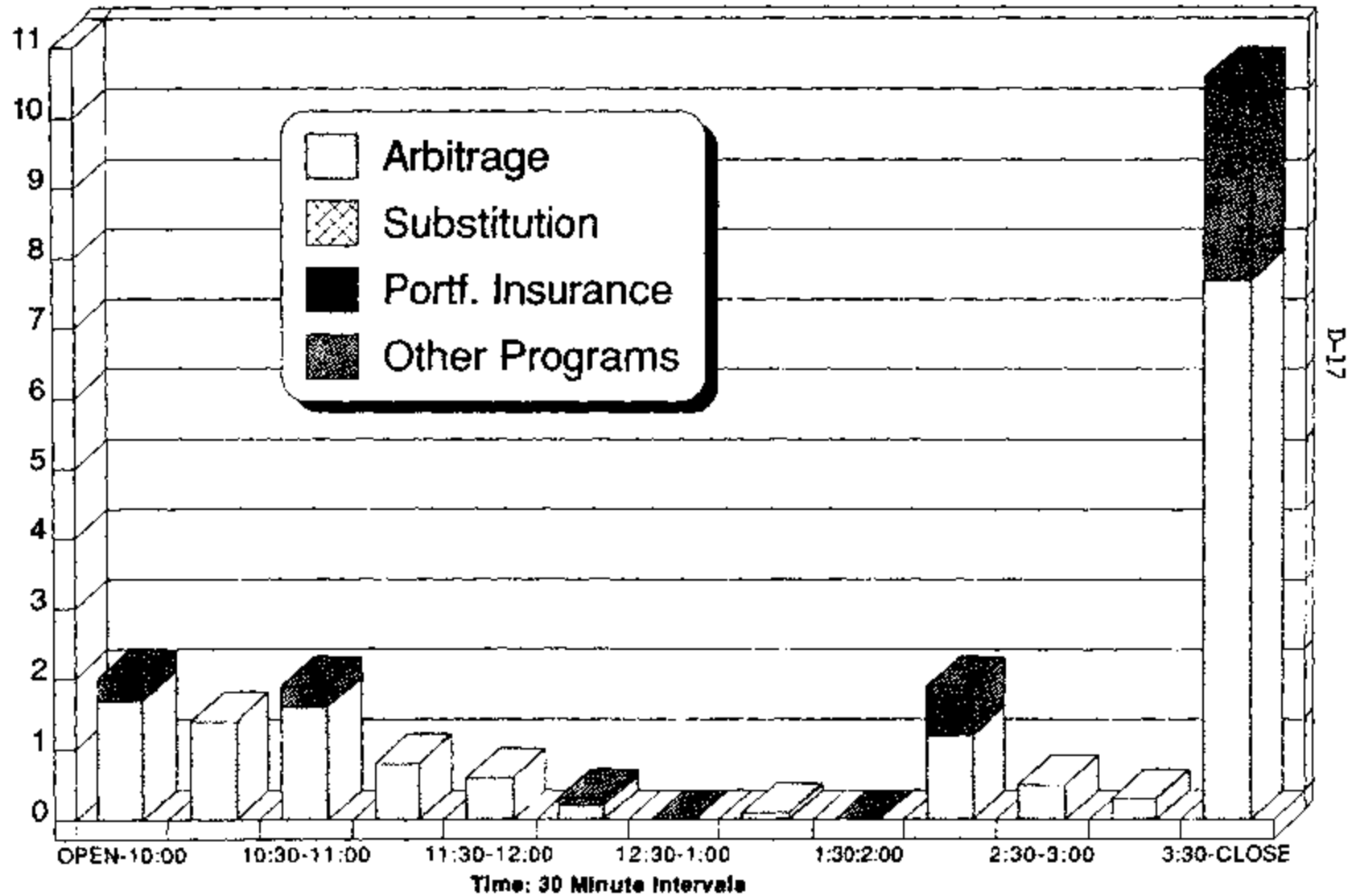
Rounding — Some figures are not arithmetic totals due to rounding.

TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 6, 1987

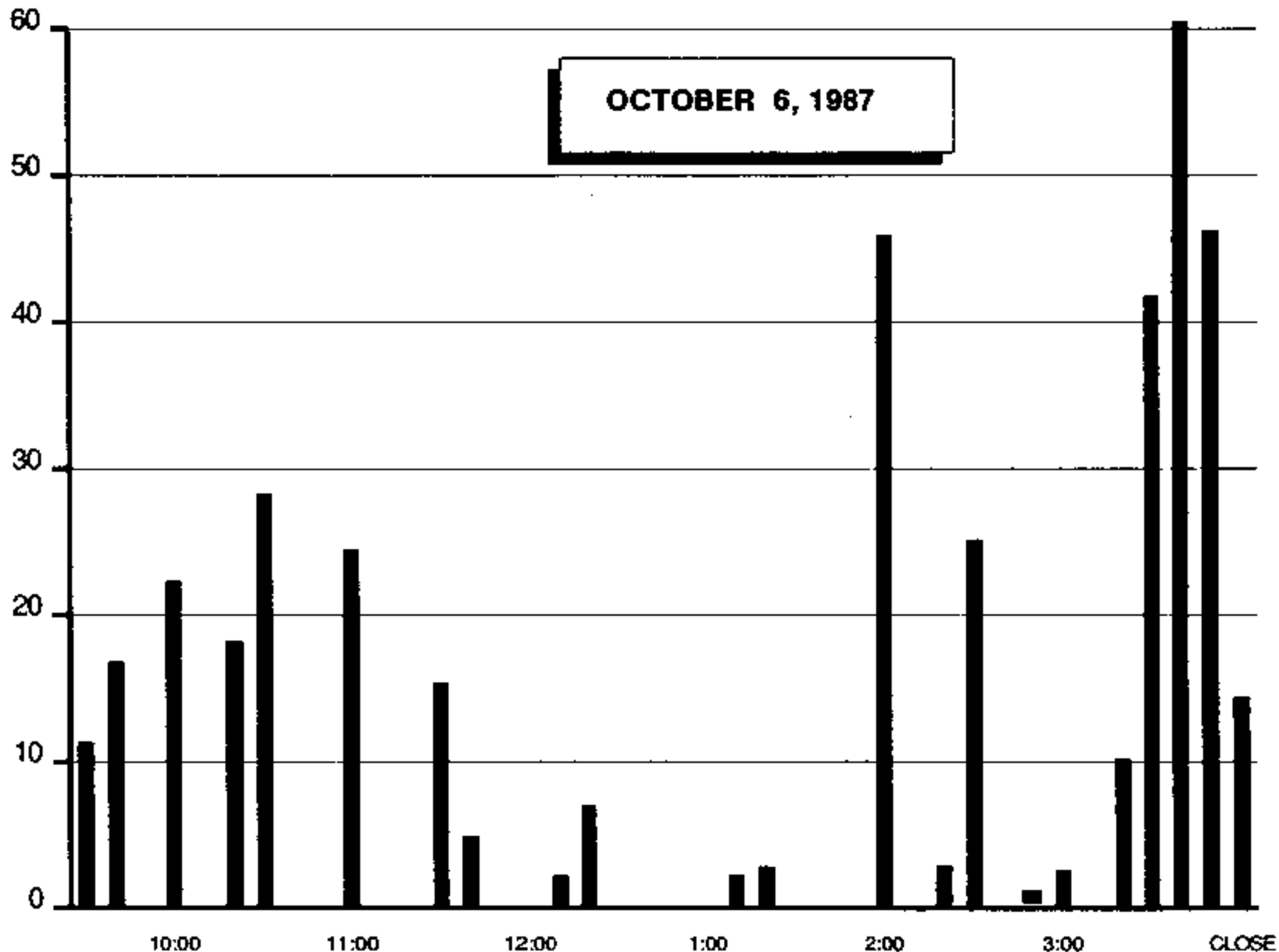
Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	0.9	0	0	0.07	0.9	8.1	11.3
9:40-9:50	0.8	0	0	0.2	1.1	12.1	16.8
9:50-10:00	0	0	0	0	0	0	0
10:00-10:10	0.7	0	0	0	0.7	15.5	22.3
10:10-10:20	0	0	0	0	0	0	0
10:20-10:30	0.7	0	0	0	0.7	13.1	18.2
10:30-10:40	1.6	0	0	0.2	1.9	22.0	28.3
10:40-10:50	0	0	0	0	0	0	0
10:50-11:00	0	0	0	0	0	0	0
11:00-11:10	0.8	0	0	0	0.8	17.2	24.5
11:10-11:20	0	0	0	0	0	0	0
11:20-11:30	0	0	0	0	0	0	0
11:30-11:40	0.5	0	0	0	0.5	11.2	15.4
11:40-11:50	0.1	0	0	0	0.1	3.6	5.4
11:50-12:00	.03	0	0	0	.03	0.1	0.1
12:00-12:10	0	0	0	0	0	0	0
12:10-12:20	0.04	0	0	0	0.04	1.5	2.2
12:20-12:30	0.1	0	0	.06	0.2	5.2	7.0
12:30-12:40	0	0	0	0	0	0	0
12:40-12:50	0	0	0	0	0	0	0
12:50-1:00	0	0	0	0	0	0	0
1:00-1:10	0	0	0	0	0	0	0
1:10-1:20	0.04	0	0	0	0.04	1.8	2.3
1:20-1:30	0.04	0	0	0	0.04	1.9	2.8
1:30-1:40	0	0	0	0	0	0	0
1:40-1:50	0	0	0	0	0	0	0
1:50-2:00	0	0	0	0	0	0	0
2:00-2:10	1.1	0	0	0.7	1.8	36.5	45.9
2:10-2:20	0	0	0	0	0	0	0
2:20-2:30	.07	0	0	0	0.07	2.1	2.9
2:30-2:40	0.4	0	0	0	0.4	17.1	25.1
2:40-2:50	0	0	0	0	0	0	0
2:50-3:00	.04	0	0	0	.04	1.3	1.8
3:00-3:10	.06	0	0	0	.06	1.8	2.6
3:10-3:20	0	0	0	0	0	0	0
3:20-3:30	0.4	0	0	0	0.4	8.3	10.2
3:30-3:40	1.4	0	0	0.5	1.9	33.0	41.8
3:40-3:50	3.5	0	0	0.7	4.3	45.0	60.5
3:50-4:00	1.8	0	0	1.6	3.2	37.3	46.2
4:00-CLOSE	0.9	0	0	0	0.9	13.2	14.4
ALL DAY	0.2	0	0	0	0.2	0	0
TOTAL	16.1	0	0	4.2	20.3	11.6	15.9

Thirty Minute Breakdown of Index-Related Selling on NYSE (October 6, 1987)

Millions of Shares



Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)

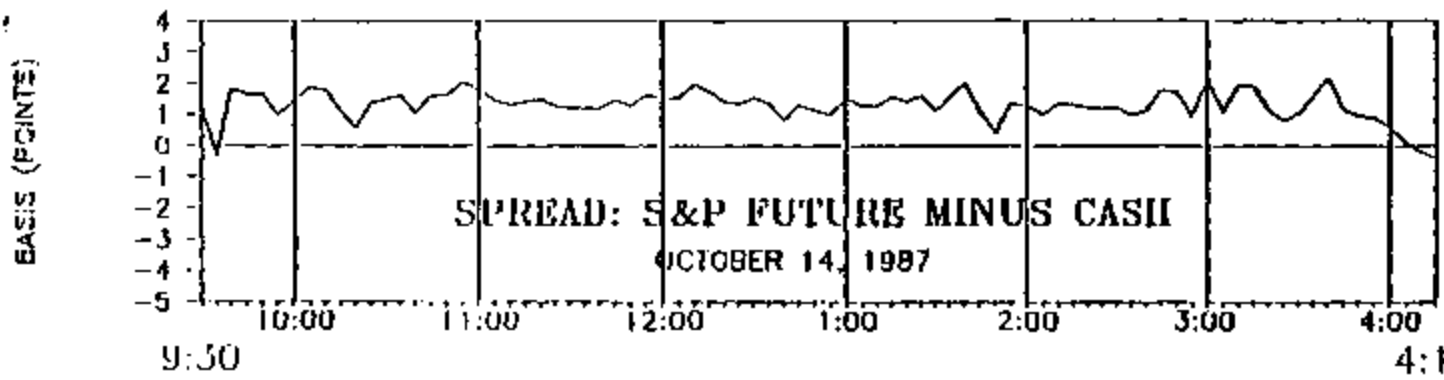
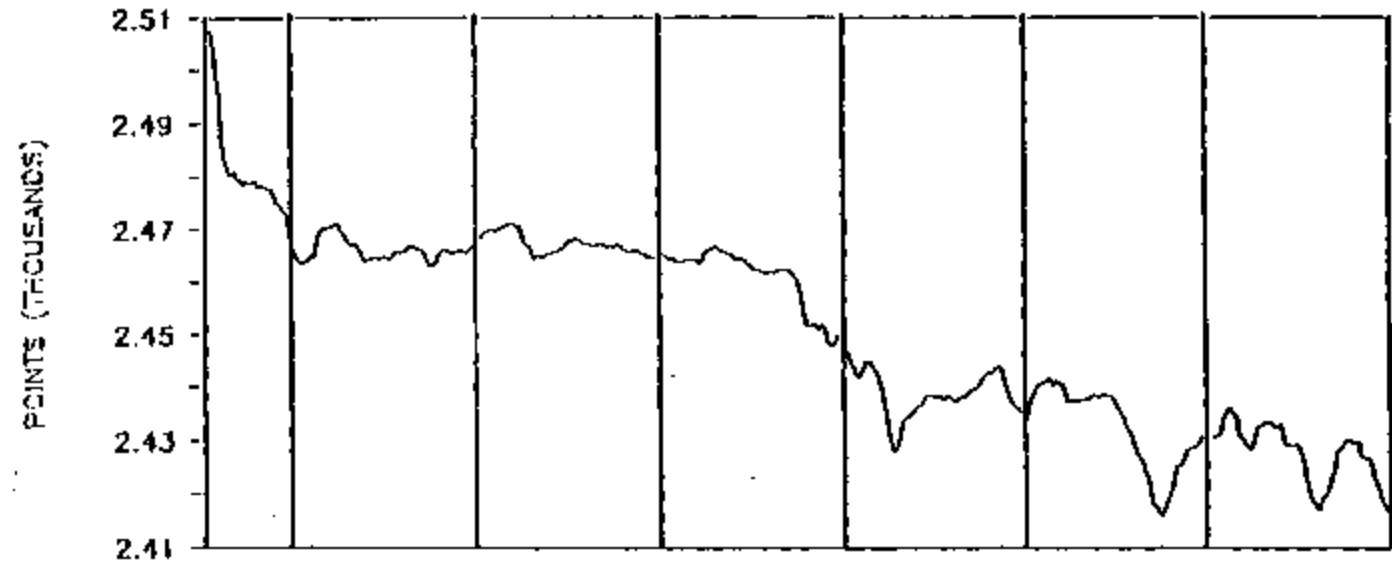


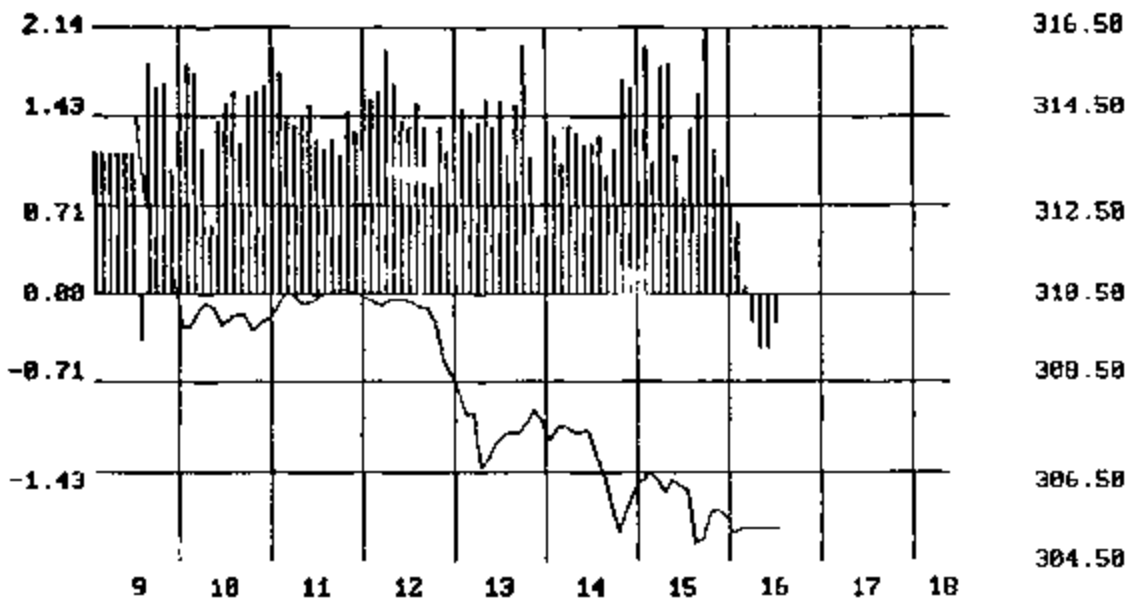
OCTOBER 14

DOW JONES IND. AVG.

OCTOBER 14, 1987; MINUTE BY MINUTE

SOURCE: NEW YORK STOCK EXCHANGE





TRADE DATE: OCTOBER 14, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SPZ"
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 14, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	25.0	18.5	1.7	0	0	0.06	1.8	7.2	9.7
10:00-10:30	16.1	12.0	2.6	0.2	0	0	2.9	17.7	23.8
10:30-11:00	13.6	9.7	1.8	0	0	0	1.8	12.9	18.2
11:00-11:30	12.7	9.0	0.6	0	0	0	0.6	4.3	6.1
11:30-12:00	11.9	8.0	1.2	0	0	0	1.2	9.7	14.4
12:00-12:30	11.3	7.5	0.4	0	0	0	0.4	3.9	5.8
12:30-1:00	14.2	10.6	2.3	0	0	0.01	2.3	16.4	21.9
1:00-1:30	19.0	14.6	5.1	0.2	0	0	5.3	28.0	36.5
1:30-2:00	10.7	7.8	0.6	0	0	0	0.6	5.8	7.8
2:00-2:30	18.4	15.3	1.5	0	0	0	1.5	7.9	9.5
2:30-3:00	19.2	14.6	3.7	0	0	0.01	3.7	19.1	25.1
3:00-3:30	14.2	10.4	1.2	0.5	0.2	0.003	1.9	13.3	18.3
3:30-Close	23.5	17.0	2.6	0.5	0	0.3	3.4	14.5	20.0
ALL DAY			0.7	0	0	1.5	2.2		
TOTAL	210.0	155.0	26.0	1.4	0.2	2.0	29.4	14.0	19.0

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

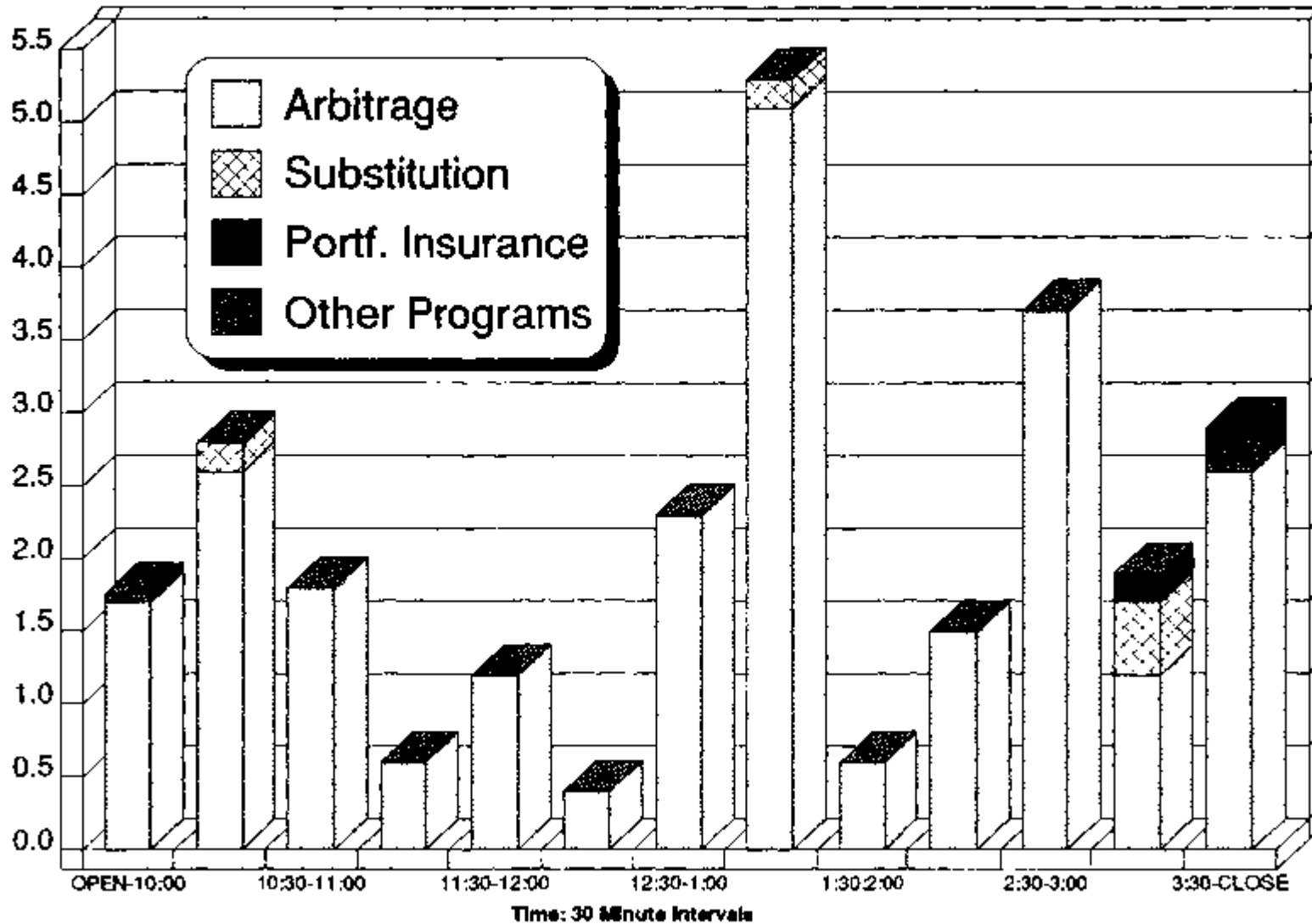
Rounding — Some figures are not arithmetic totals due to rounding.

TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 14, 1987

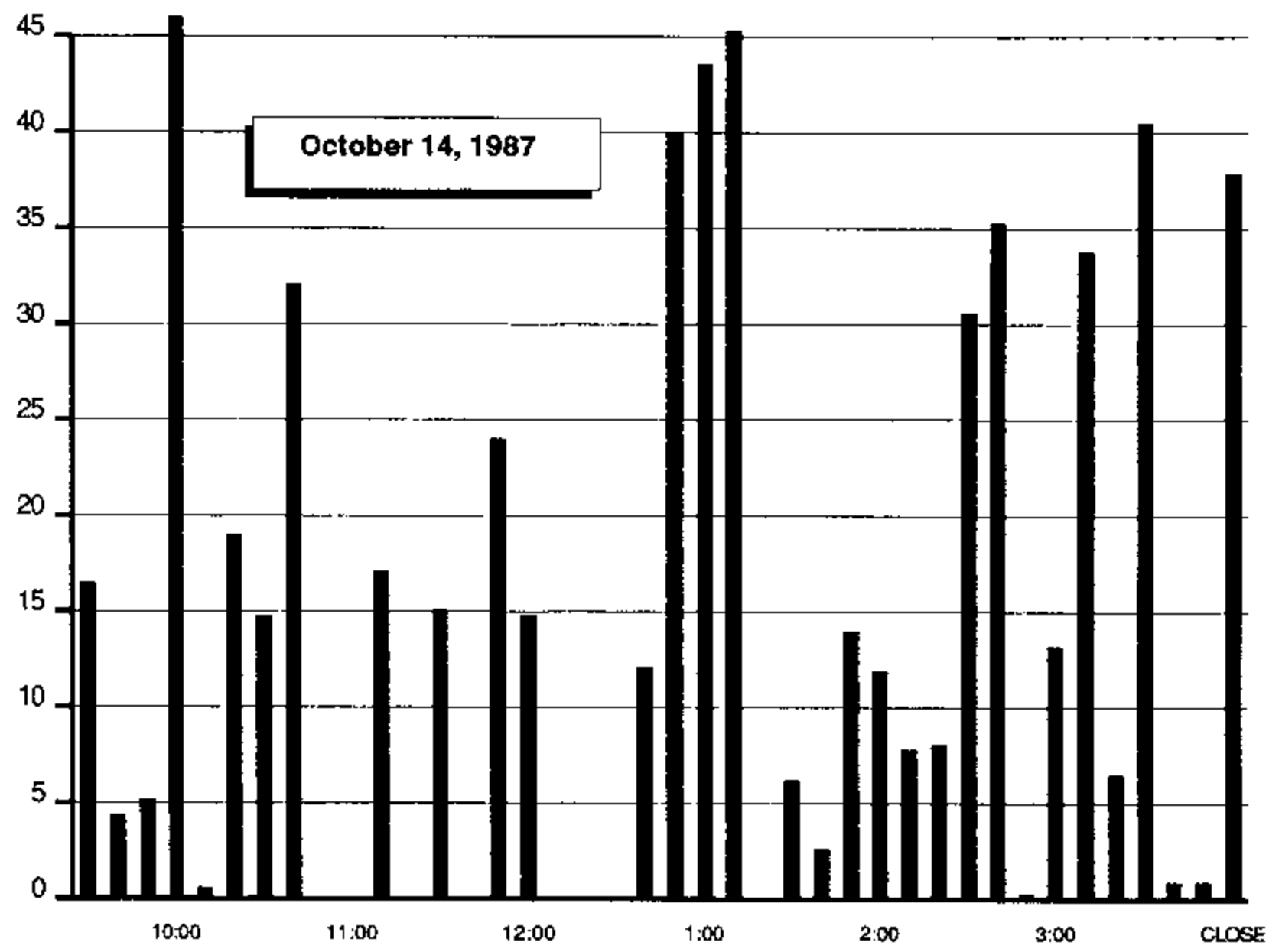
Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	1.2	0	0	.06	1.3	11.9	16.5
9:40-9:50	0.2	0	0	.01	0.2	3.2	4.4
9:50-10:00	0.3	0	0	0	0.3	4.1	5.2
10:00-10:10	2.2	0	0	0	2.2	36.1	45.8
10:10-10:20	0.02	0	0	0	.02	0.5	0.6
10:20-10:30	0.4	0.2	0	0	0.7	13.4	19.0
10:30-10:40	0.5	0	0	0	0.5	10.2	14.8
10:40-10:50	1.3	0	0	0	1.3	24.5	32.1
10:50-11:00	0	0	0	0	0	0	0
11:00-11:10	0	0	0	0	0	0	0
11:10-11:20	0.6	0	0	0	0.6	11.9	17.1
11:20-11:30	0	0	0	0	0	0	0
11:30-11:40	0.4	0	0	0	0.4	10.4	15.1
11:40-11:50	0	0	0	0	0	0	0
11:50-12:00	0.8	0	0	0	0.8	16.8	24.0
12:00-12:10	0.4	0	0	0	0.4	10.6	14.8
12:10-12:20	0	0	0	0	0	0	0
12:20-12:30	0	0	0	0	0	0	0
12:30-12:40	0	0	0	0	0	0	0
12:40-12:50	0.5	0	0	.01	0.5	8.7	12.1
12:50-1:00	1.8	0	0	0	1.8	32.0	40.0
1:00-1:10	2.0	0.2	0	0	2.3	34.9	43.6
1:10-1:20	3.1	0	0	0	3.1	36.3	45.3
1:20-1:30	0	0	0	0	0	0	0
1:30-1:40	0.2	0	0	0	0.2	4.5	6.2
1:40-1:50	.06	0	0	0	0.06	1.9	2.6
1:50-2:00	0.4	0	0	0	0.4	10.2	14.0
2:00-2:10	0.7	0	0	0	0.7	10.4	11.9
2:10-2:20	0.5	0	0	0	0.5	6.6	7.8
2:20-2:30	0.2	0	0	0	0.2	6.1	8.1
2:30-2:40	1.7	0	0	0	1.7	24.3	31.6
2:40-2:50	1.9	0	0	0	1.9	26.6	35.3
2:50-3:00	0	0	0	.01	.01	0.2	0.3
3:00-3:10	0	0.5	0	.0034	0.5	10.5	13.2
3:10-3:20	1.2	0	0	0	1.2	23.4	33.8
3:20-3:30	.04	0	0.2	0	0.21	4.7	6.5
3:30-3:40	1.7	0.5	0	0	2.2	30.6	40.5
3:40-3:50	.04	0	0	0	.04	0.6	0.9
3:50-4:00	.04	0	0	0	.04	0.7	0.9
4:00-CLOSE	0.8	0	0	0.3	1.1	25.5	37.9
ALL DAY	0.7	0	0	1.5	2.2		
TOTAL	26.0	1.4	0.2	2.0	29.4	14.0	19.0

Thirty Minute Breakdown of Index-Related Selling on NYSE (October 14, 1987)

Millions of Shares



Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)

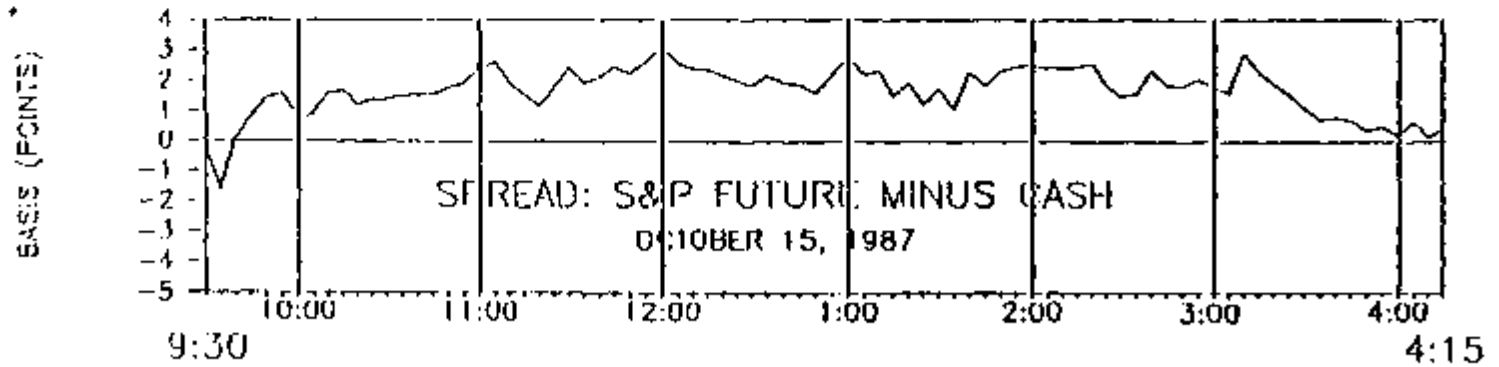
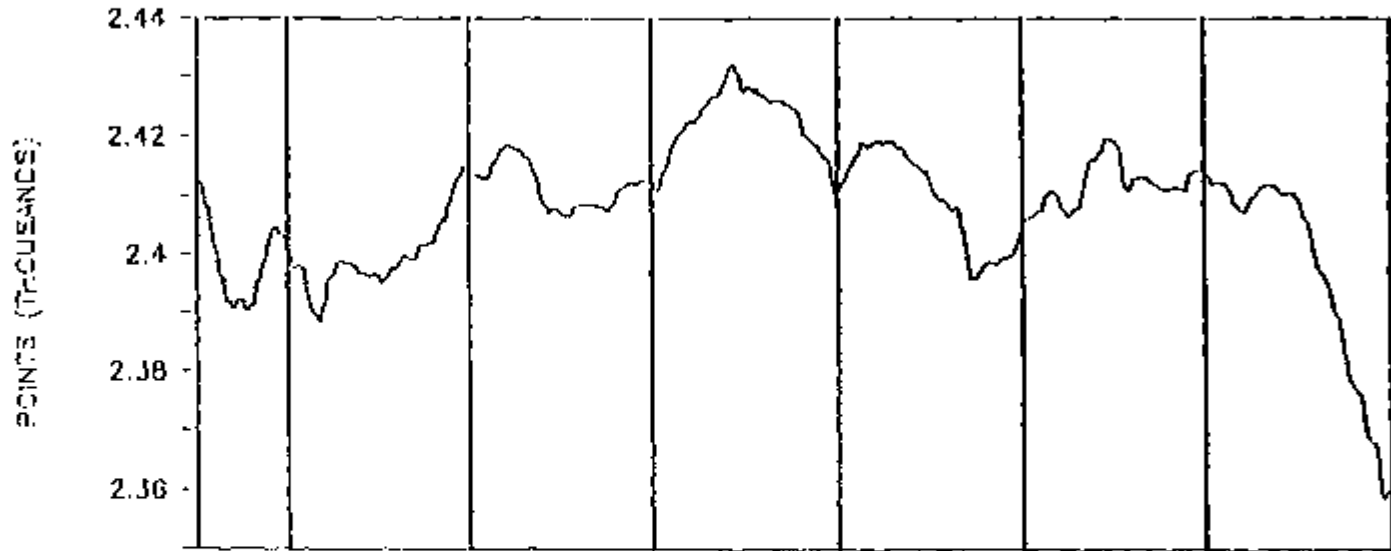


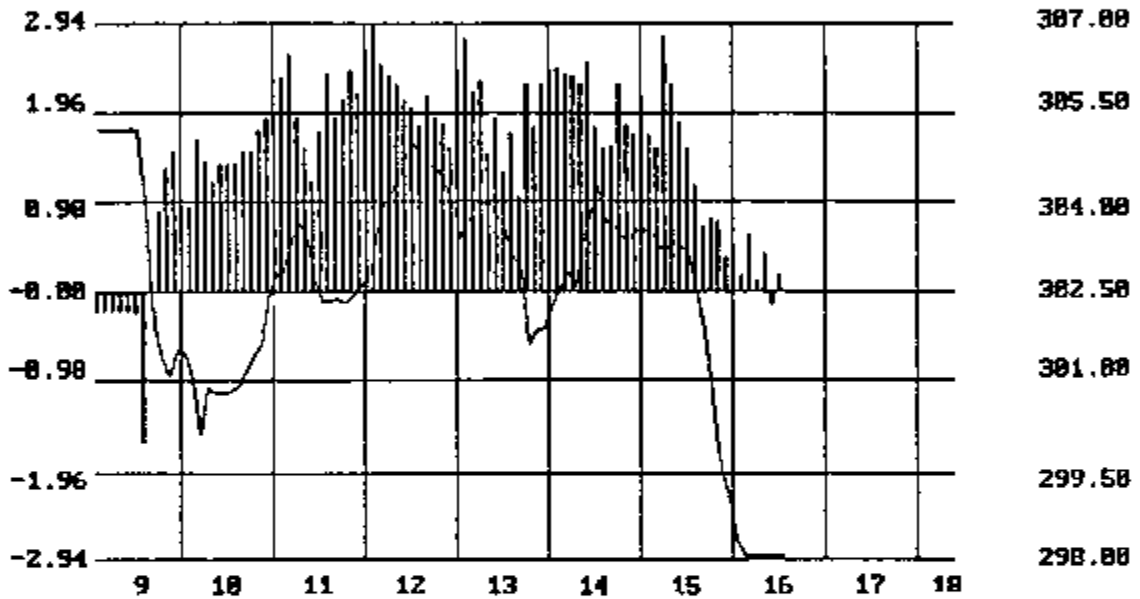
OCTOBER 15

DOW JONES IND. AVG.

OCTOBER 15, 1987: MINUTE BY MINUTE

SOURCE: NEW YORK STOCK EXCHANGE





TRADE DATE: OCTOBER 15, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SPZ"
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 15, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	48.5	33.4	6.0	0	0.3	0.4	6.7	13.8	20
10:00-10:30	28.5	21.3	1.8	0.6	0	0.3	2.7	9.5	12.7
10:30-11:00	23.9	15.9	0	0	0	.01	.01	.04	0.06
11:00-11:30	22.5	14.1	.02	0	0.2	0.1	0.3	1.3	2.1
11:30-12:00	15.2	11.4	0.2	0	0	.04	0.2	1.3	1.8
12:00-12:30	20.4	14.7	0	0	0	0	0	0	0
12:30-1:00	16.3	8.5	.09	0	0	0	.09	0.5	1
1:00-1:30	8.0	5.6	0.2	0	0	0	0.2	2.5	3.6
1:30-2:00	20.0	11.1	1.4	0	0	0	1.4	7	12.6
2:00-2:30	13.8	9.6	0.1	0	.04	0.1	0.2	1.4	2.1
2:30-3:00	8.3	5.3	0.3	0	0	0	0.3	3.6	5.7
3:00-3:30	10.9	8.1	0.2	0	0	0.6	0.8	7.3	9.9
3:30-Close	30.0	23.1	4.7	0	0	2.1	6.8	22.7	29.4
ALL DAY									
TOTAL	266.3	182.1	14.84	.6	.54	3.65	19.7	7.4	10.8

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

Rounding — Some figures are not arithmetic totals due to rounding.

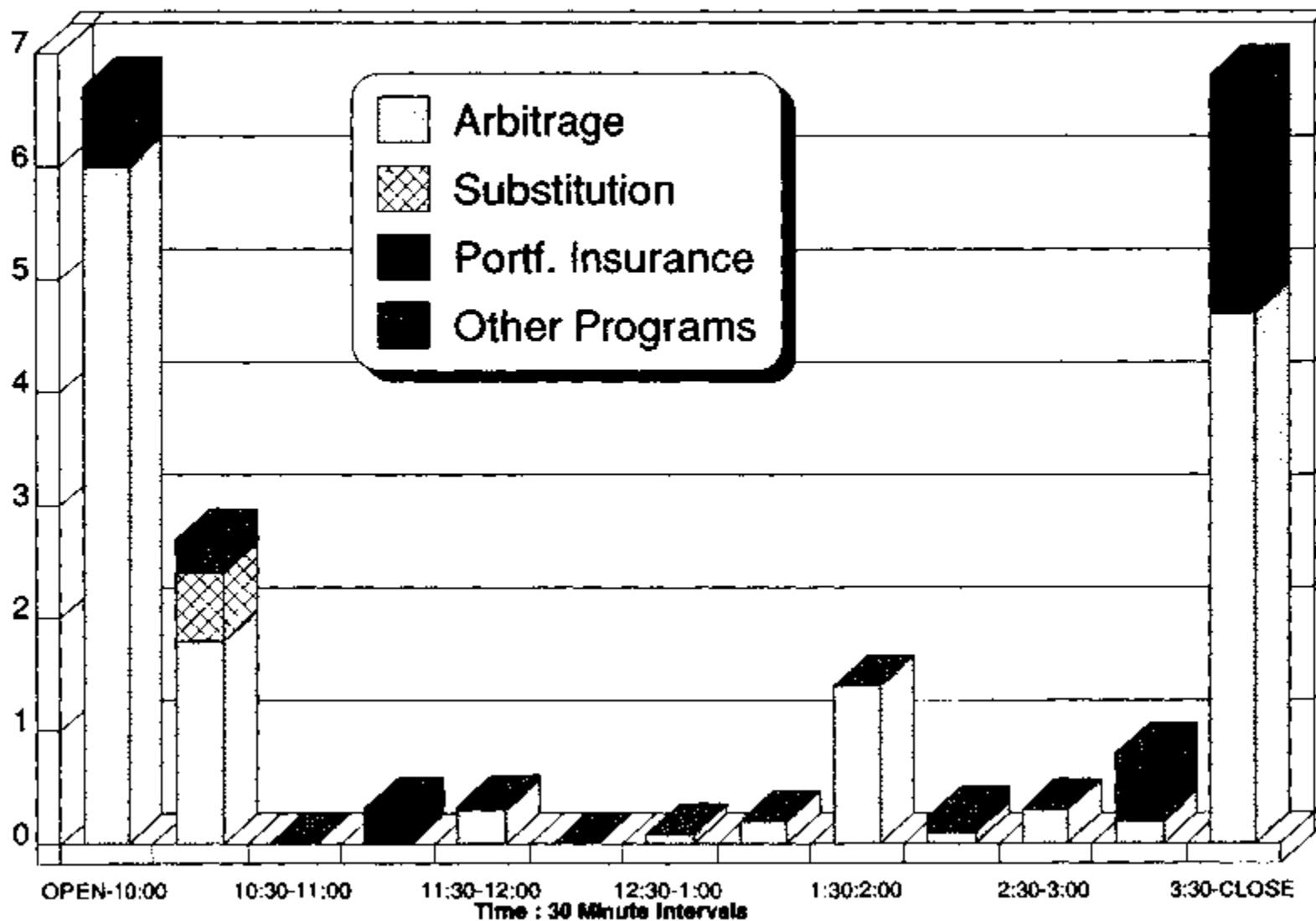
TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE

October 15, 1987

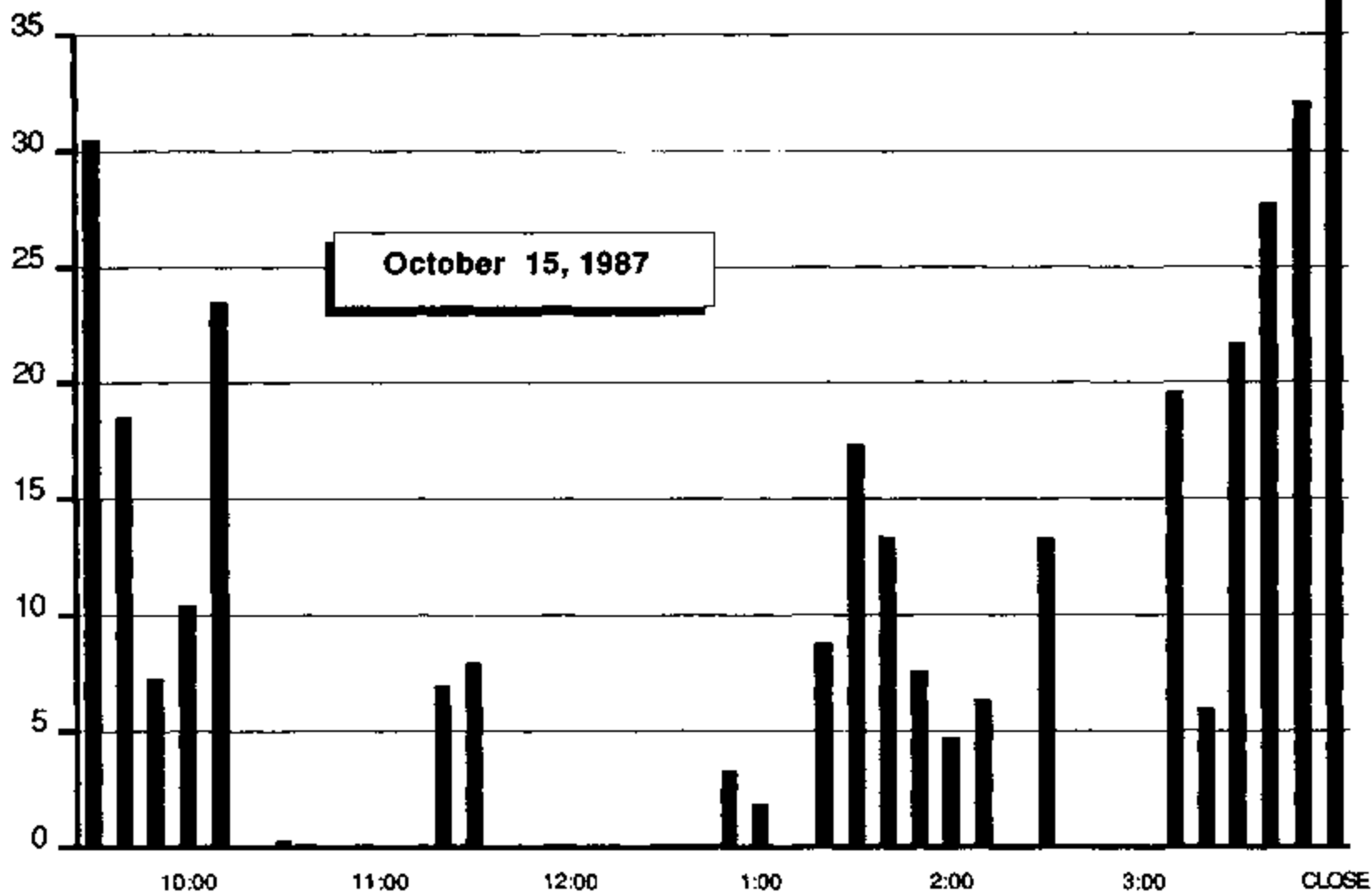
Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	3.5	0	0	0.4	3.9	22.2	30.5
9:40-9:50	1.9	0	0.3	0	2.1	13.2	18.3
9:50-10:00	0.7	0	0	0	0.7	4.7	7.7
10:00-10:10	1.0	0	0	0	1.0	8.8	10.9
10:10-10:20	0.8	0.6	0	.01	1.7	16.2	23.0
10:20-10:30	0	0	0	0	0	0.0	0
10:30-10:40	0	0	0	.01	.01	.14	.24
10:40-10:50	0	0	0	0	0	0	0
10:50-11:00	0	0	0	0	0	0	0
11:00-11:10	0	0	0	0	0	0	0
11:10-11:20	0	0	0	0	0	0	0
11:20-11:30	.02	0	0.2	0.1	0.3	4.6	6.8
11:30-11:40	0.2	0	0	.04	0.2	3.8	5.3
11:40-11:50	0	0	0	0	0	0	0
11:50-12:00	0	0	0	0	0	0	0
12:00-12:10	0	0	0	0	0	0	0
12:10-12:20	0	0	0	0	0	0	0
12:20-12:30	0	0	0	0	0	0	0
12:30-12:40	0	0	0	0	0	0	0
12:40-12:50	0	0	0	0	0	0	0
12:50-1:00	.09	0	0	0	.09	1.5	3.3
1:00-1:10	.04	0	0	0	.04	1.4	1.8
1:10-1:20	0	0	0	0	0	0	0
1:20-1:30	0.2	0	0	0	0.2	7.1	10.0
1:30-1:40	0.4	0	0	0	0.4	5.3	19.0
1:40-1:50	0.8	0	0	.04	0.8	10.5	14.0
1:50-2:00	0.2	0	0	0	0.2	4.2	6.1
2:00-2:10	0.1	0	0	0	0.1	2.1	3.7
2:10-2:20	0	0	.04	0.1	0.1	2.9	4.2
2:20-2:30	0	0	0	0	0	0	0
2:30-2:40	0.3	0	0	0	0.3	9.4	15.0
2:40-2:50	0	0	0	0	0	0	0
2:50-3:00	0	0	0	0	0	0	0
3:00-3:10	0	0	0	0	0	0	0
3:10-3:20	0.1	0	0	0.6	0.7	15.9	20.0
3:20-3:30	0.1	0	0	0	0.1	3.0	4.8
3:30-3:40	0.6	0	0	0.2	0.8	16.0	21.1
3:40-3:50	2.3	0	0	0	2.3	21.9	27.7
3:50-4:00	1.1	0	0	1.4	2.6	25.0	32.5
4:00-CLOSE	0.7	0	0	0.4	1.1	27.5	37.7
ALL DAY							
TOTAL	14.84	.6	.54	3.65	19.7	7.4	10.8

Thirty Minute Breakdown of Index-Related Selling on NYSE (October 15, 1987)

Millions of Shares



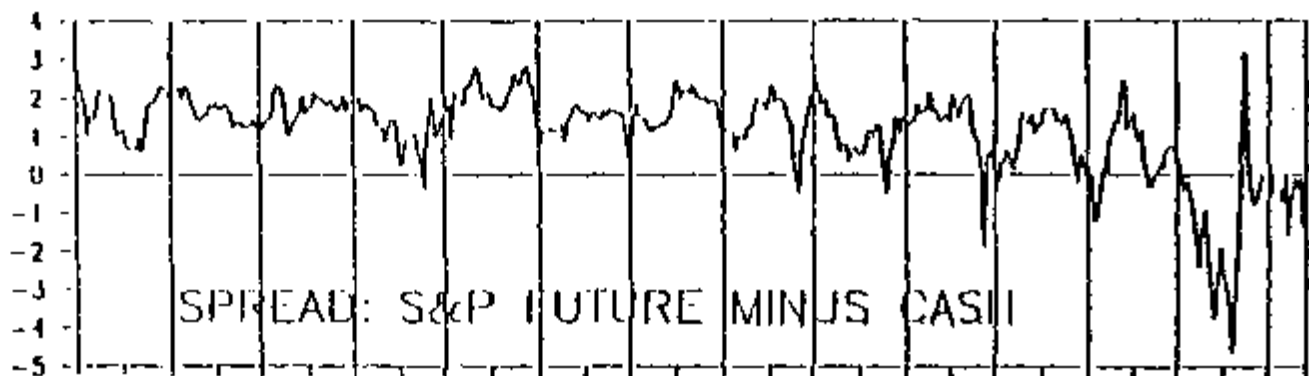
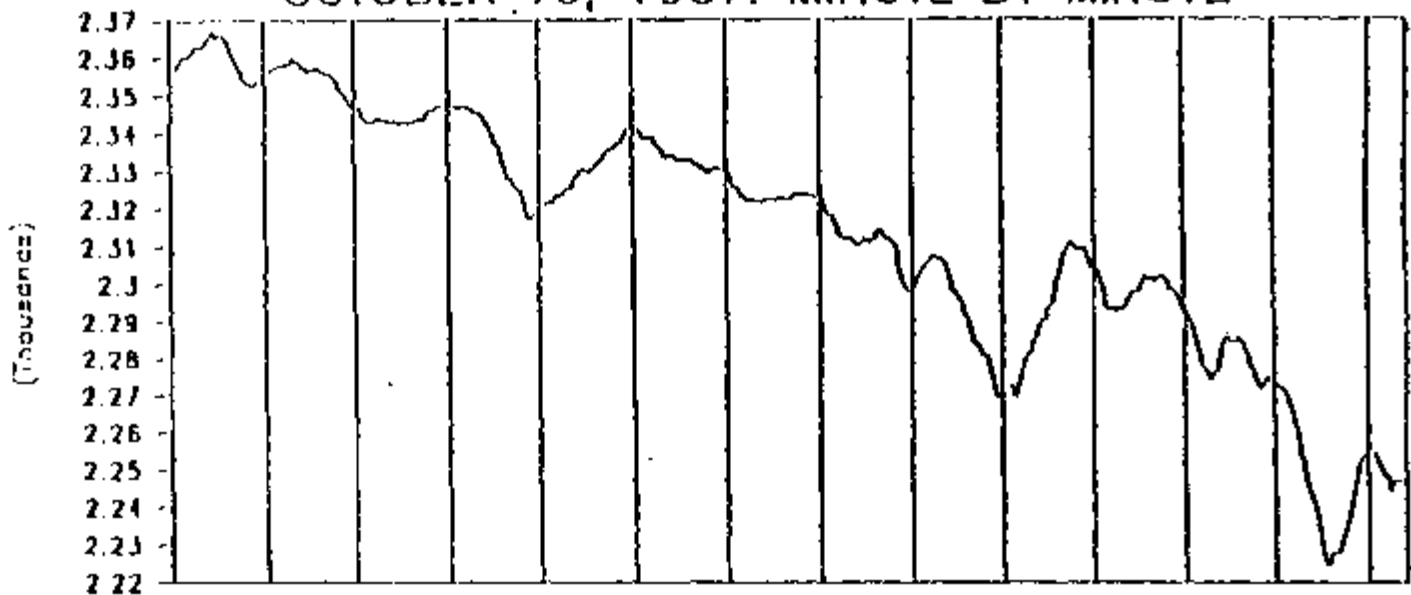
Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)



OCTOBER 16

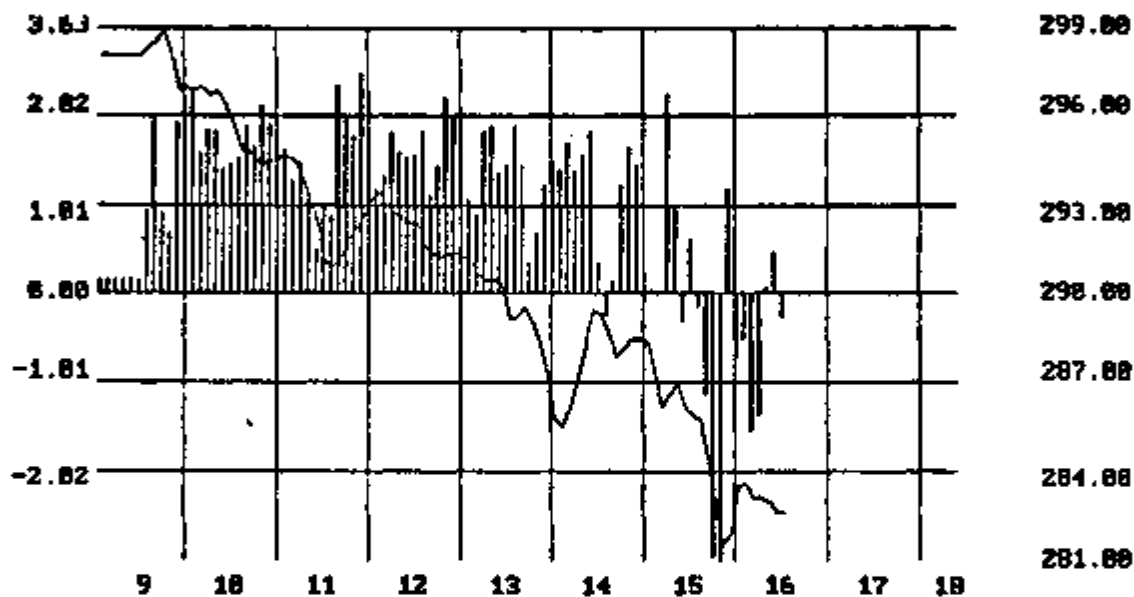
DOW JONES IND. AVG. OCTOBER 16, 1987: MINUTE BY MINUTE

SOURCE: NEW YORK STOCK EXCHANGE



9:30

4:15



TRADE DATE: OCTOBER 16, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SPZ"
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 16, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	39.3	28.5	4.4	0	0.4	1.3	6.1	15.5	21.4
10:00-10:30	24.4	17.2	0.6	1.3	0.1	0	2.0	8.2	11.6
10:30-11:00	23.7	17.2	0.3	0	0.6	0.1	1.1	4.6	6.4
11:00-11:30	26.6	19.5	2.0	1.8	0	0.02	3.8	14.3	19.5
11:30-12:00	26.4	17.9	0.8	0	0.1	0.1	1.0	3.8	5.6
12:00-12:30	15.0	10.4	0.2	0	0	0	0.2	1.3	1.9
12:30-1:00	14.9	9.8	0.8	0	0	0.3	1.1	7.4	11.2
1:00-1:30	17.9	12.8	0.5	0	0	0	0.5	2.8	3.9
1:30-2:00	29.0	20.9	4.0	1.1	0.3	0.5	5.9	20.3	28.2
2:00-2:30	30.0	21.8	1.5	0	0	1.1	2.6	8.7	11.9
2:30-3:00	20.8	15.0	2.4	0	0.7	0.7	3.8	18.3	25.3
3:00-3:30	23.0	17.0	3.8	0	0.7	0.5	5.0	21.7	29.4
3:30-Close	53.6	43.0	9.5	2.0	1.7	2.5	15.7	29.3	36.5
ALL DAY			0.2	0	0	0	0.2		
TOTAL	344.1	251.0	31.0	6.2	4.6	7.1	49.0	14.2	19.5

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

Rounding — Some figures are not arithmetic totals due to rounding.

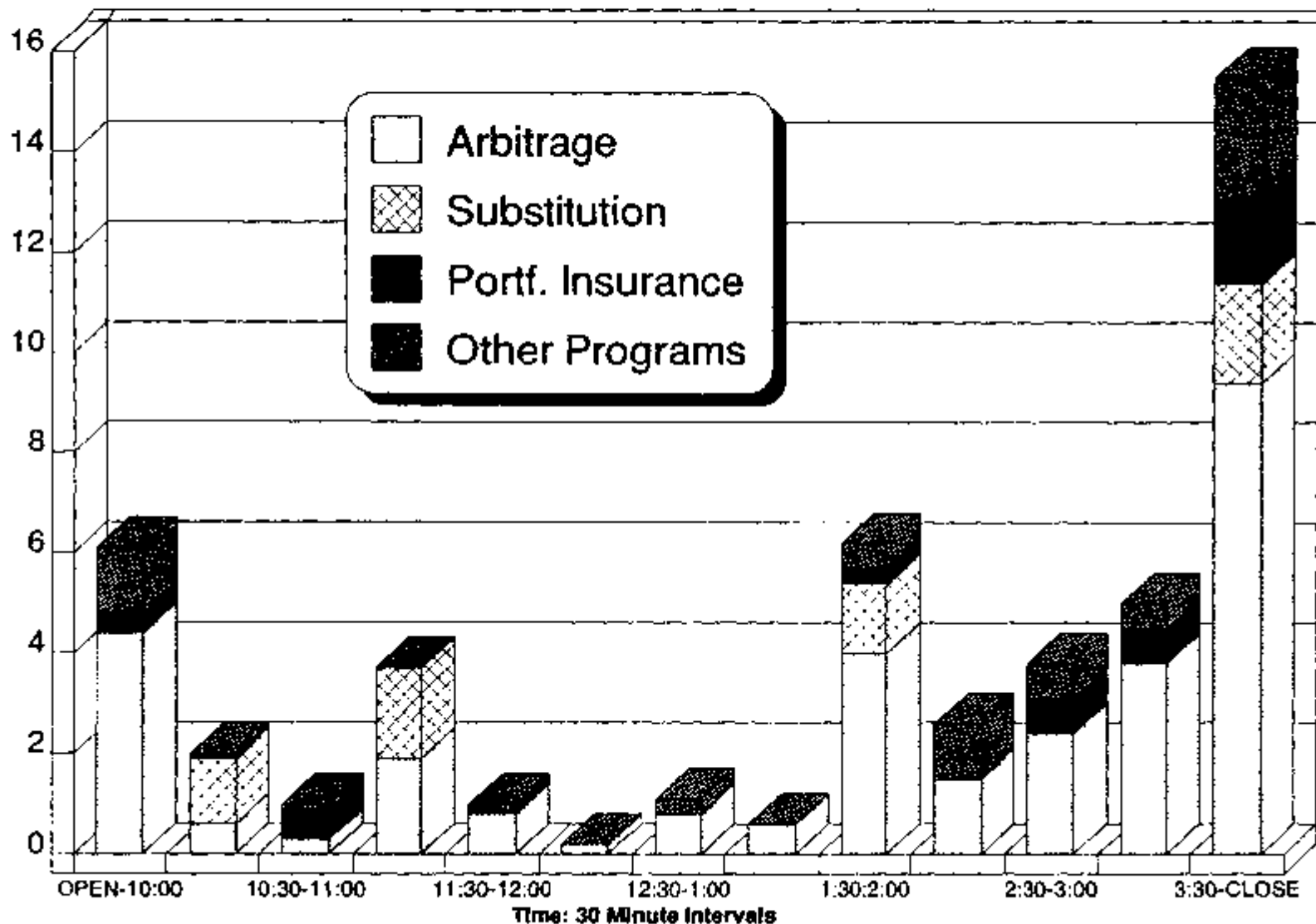
TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE

October 16, 1987

Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	1.4	0	0.3	1.3	3.0	18.3	27.5
9:40-9:50	0.2	0	0	0	0.2	1.8	2.4
9:50-10:00	2.8	0	0.05	0	2.9	24.6	31.5
10:00-10:10	0	0	0	0	0	0	0
10:10-10:20	0.1	0	0	0	0.1	1.3	2.0
10:20-10:30	0.5	1.3	0.1	0	1.9	24.1	32.8
10:30-10:40	0.3	0	0.6	0.1	1.1	12.2	16.2
10:40-10:50	0	0	0	0	0	0	0
10:50-11:00	0	0	0	0	0	0	0
11:00-11:10	0	0	0	0	0	0	0
11:10-11:20	0.9	0	0	0	0.9	10.5	13.2
11:20-11:30	1.1	1.8	0	0.02	2.9	24.0	31.9
11:30-11:40	0.8	0	0.1	0.1	1.0	9.9	15.4
11:40-11:50	0	0	0	0	0	0	0
11:50-12:00	0	0	0	0	0	0	0
12:00-12:10	0	0	0	0	0	0	0
12:10-12:20	0.2	0	0	0	0.2	4.4	6.7
12:20-12:30	0	0	0	0	0	0	0
12:30-12:40	0.8	0	0	0.3	1.1	17.7	23.9
12:40-12:50	0	0	0	0	0	0	0
12:50-1:00	0	0	0	0	0	0	0
1:00-1:10	0.1	0	0	0	0.1	1.9	2.5
1:10-1:20	0.4	0	0	0	0.4	6.8	10.0
1:20-1:30	0.04	0	0	0	0.04	0.6	0.8
1:30-1:40	2.6	0.5	0	0.005	3.1	35.2	51.7
1:40-1:50	0.7	0	0	0	0.7	10.0	13.7
1:50-2:00	0.7	0.6	0.3	0.5	2.1	16.0	21.4
2:00-2:10	1.3	0	0	0	1.3	12.9	18.1
2:10-2:20	0	0	0	1.1	1.1	11.6	16.2
2:20-2:30	0.2	0	0	0	0.2	2.0	2.6
2:30-2:40	1.5	0	0	0	1.5	16.1	21.7
2:40-2:50	0.9	0	0	0.5	1.4	25.0	36.8
2:50-3:00	0.04	0	0.7	0.2	0.9	15.5	20.9
3:00-3:10	1.8	0	0	0.2	2.0	22.0	28.6
3:10-3:20	1.7	0	0	0.1	1.8	31.6	43.9
3:20-3:30	0.3	0	0.7	0.2	1.1	13.6	18.6
3:30-3:40	0.7	0	1.2	0.006	1.9	19.4	24.7
3:40-3:50	5.7	0.9	0.5	0.5	7.6	52.1	67.9
3:50-4:00	0.7	0	0	0.08	0.8	7.0	10.0
4:00-CLOSE	2.4	1.1	0	1.9	5.4	30.5	33.5
ALL DAY	0.2	0	0	0	0.2		
TOTAL	31.0	6.2	4.6	7.1	49.0	14.2	19.5

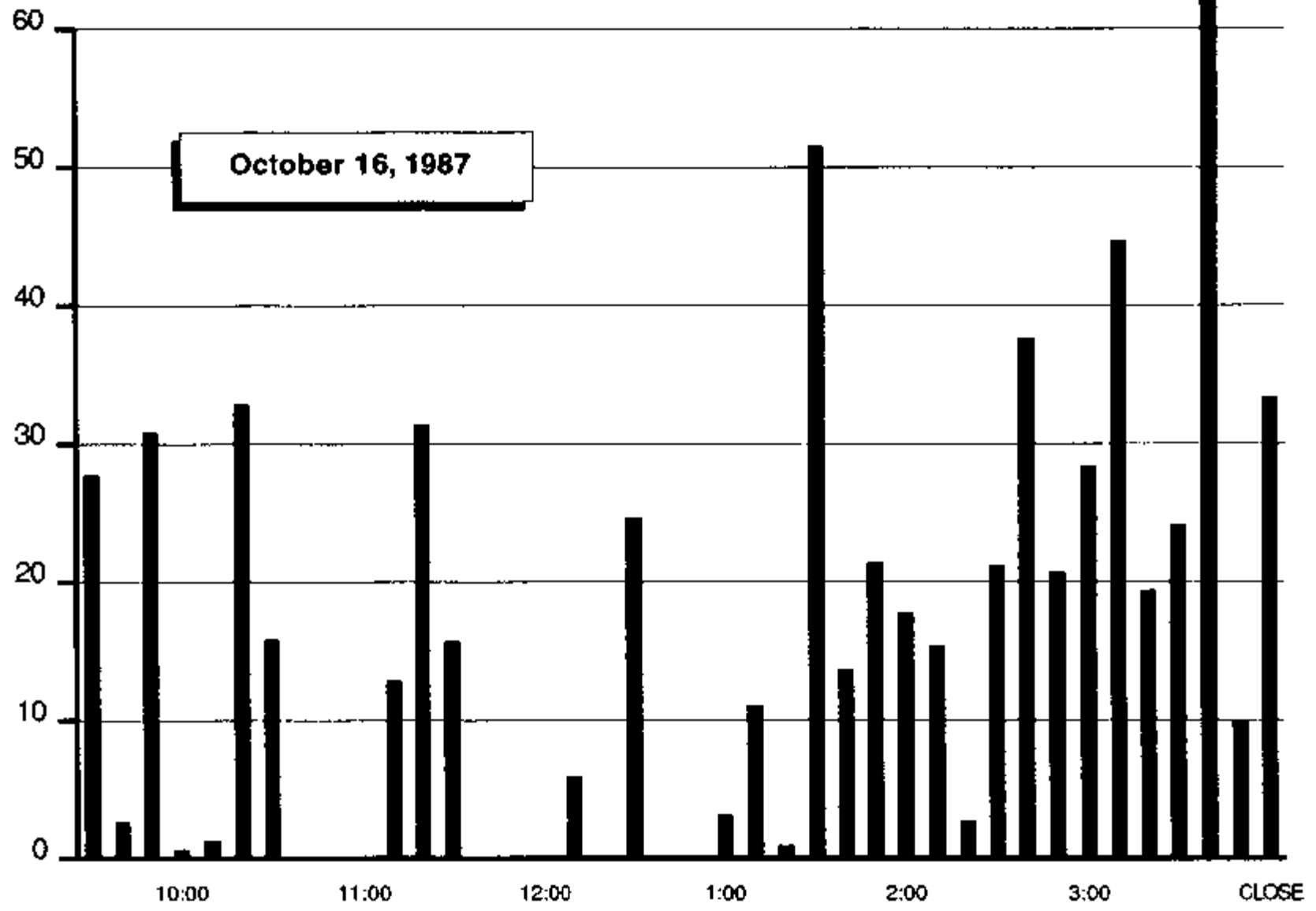
Thirty Minute Breakdown of Index-Related Selling on NYSE (October 16, 1987)

Millions of Shares



D-41

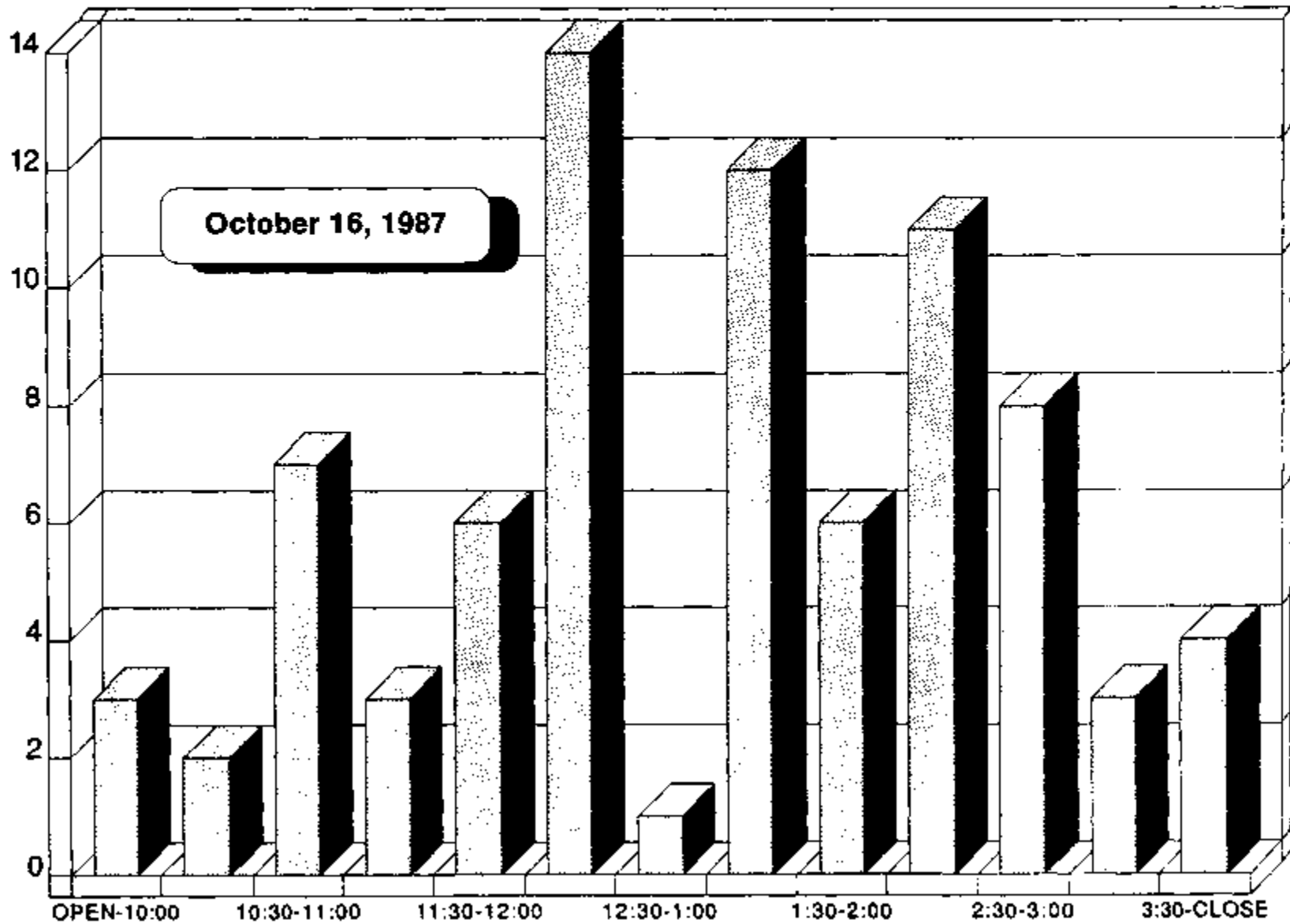
Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)



D-42

Portfolio Insurance Futures Selling Percentage of CME Volume

Percentage of
Total Volume

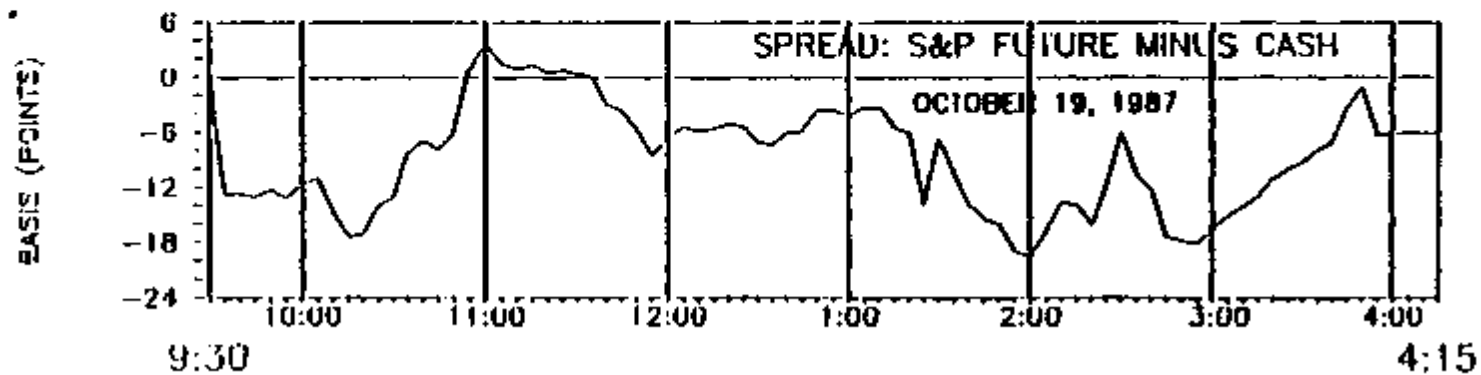
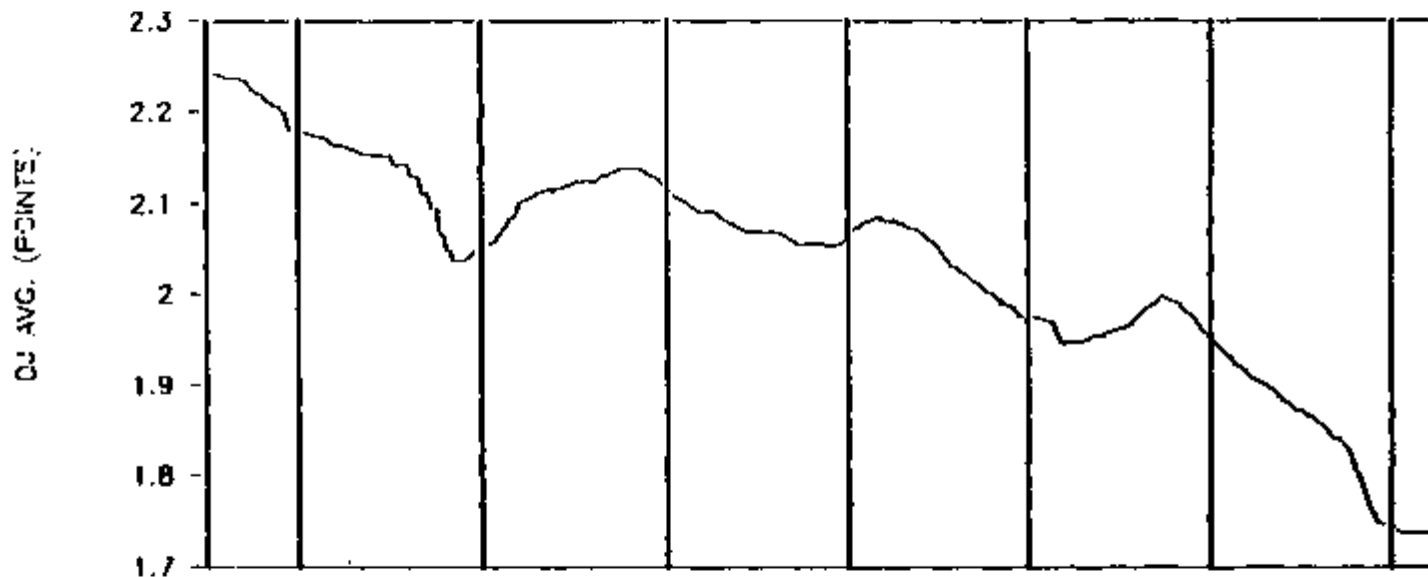


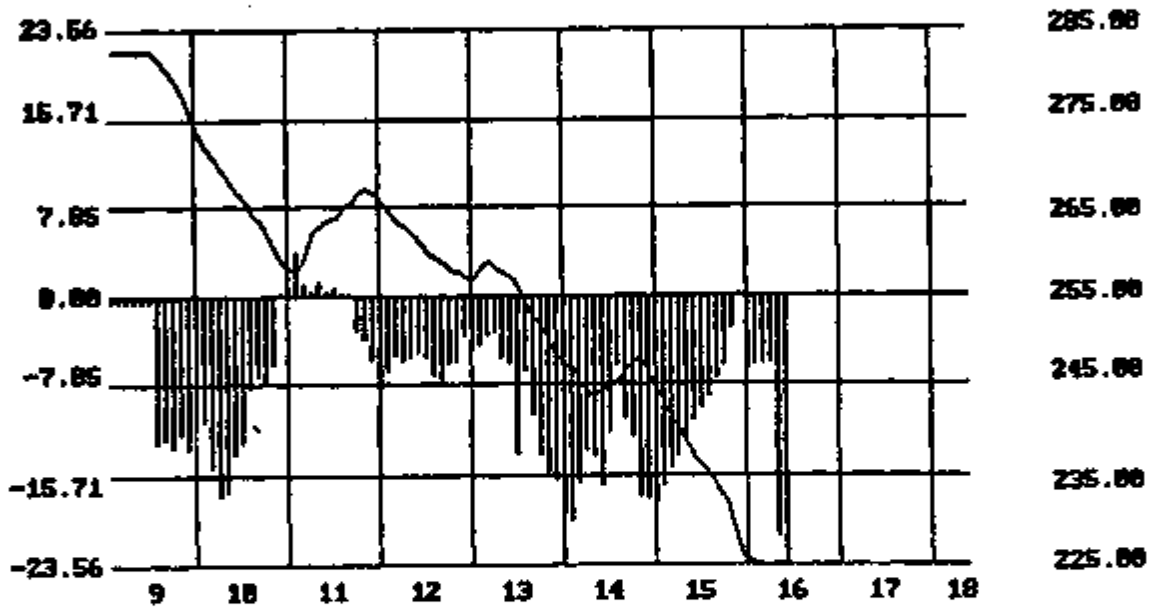
OCTOBER 19

DOW JONES IND. AVG.

OCTOBER 19, 1987: MINUTE BY MINUTE

SOURCE: NEW YORK STOCK EXCHANGE





TRADE DATE: OCTOBER 19, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SPZ
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE

October 19, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Programs Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	51.1	33.9	4.8	0	0.3	3.4	8.5	16.6	25.1
10:00-10:30	47.0	31.0	8.4	0	0	0	8.4	17.9	27.0
10:30-11:00	55.9	41.7	2.1	0	5.3	0	7.4	13.3	17.9
11:00-11:30	60.7	46.8	0	0	4.4	0.5	4.9	8.1	10.5
11:30-12:00	47.5	32.9	0.9	0	2.0	0.6	3.5	7.3	10.6
12:00-12:30	40.4	30.4	3.2	0.5	4.7	0.6	9.0	22.3	29.6
12:30-1:00	40.8	25.6	3.3	0	4.3	0.02	7.7	18.8	30.0
1:00-1:30	36.7	22.7	4.3	0.5	4.1	0	8.9	24.3	39.0
1:30-2:00	45.7	28.7	2.5	1.0	8.9	0.1	12.5	27.4	43.7
2:00-2:30	36.4	28.0	0.8	0	0.7	0.1	1.6	4.4	5.8
2:30-3:00	36.7	24.9	1.4	0.2	0.3	1.7	3.7	9.9	14.6
3:00-3:30	46.3	33.0	1.5	0.6	1.6	0.3	4.0	8.7	12.3
3:30-Close	63.2	43.4	1.3	0	3.2	4.4	8.8	13.9	20.3
ALL DAY			0.2	0	0	0.1	0.3		
TOTAL	608.3	423.0	34.7	2.8	39.9	11.8	89.0	14.7	21.1

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

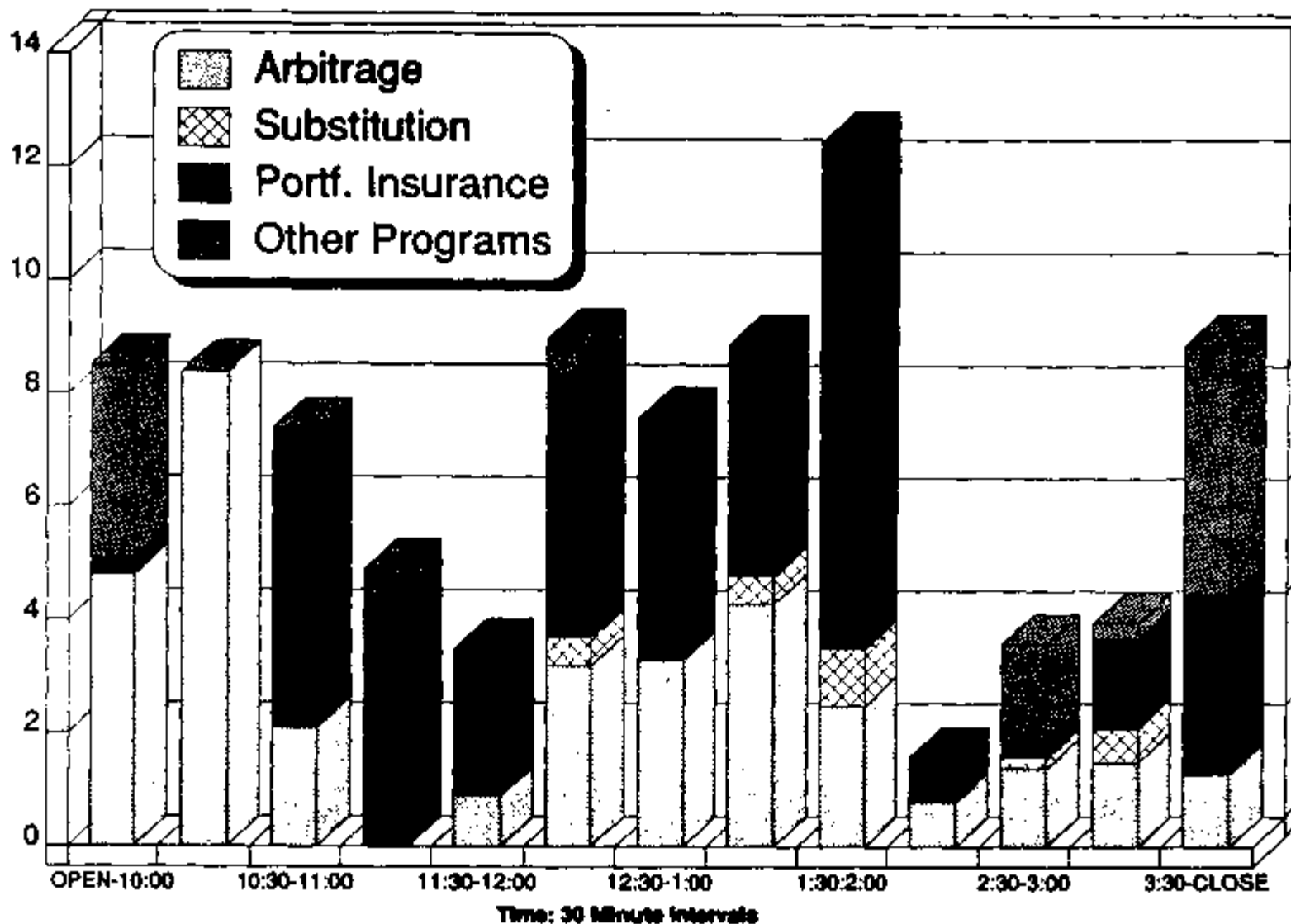
Rounding — Some figures are not arithmetic totals due to rounding.

TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 19, 1987

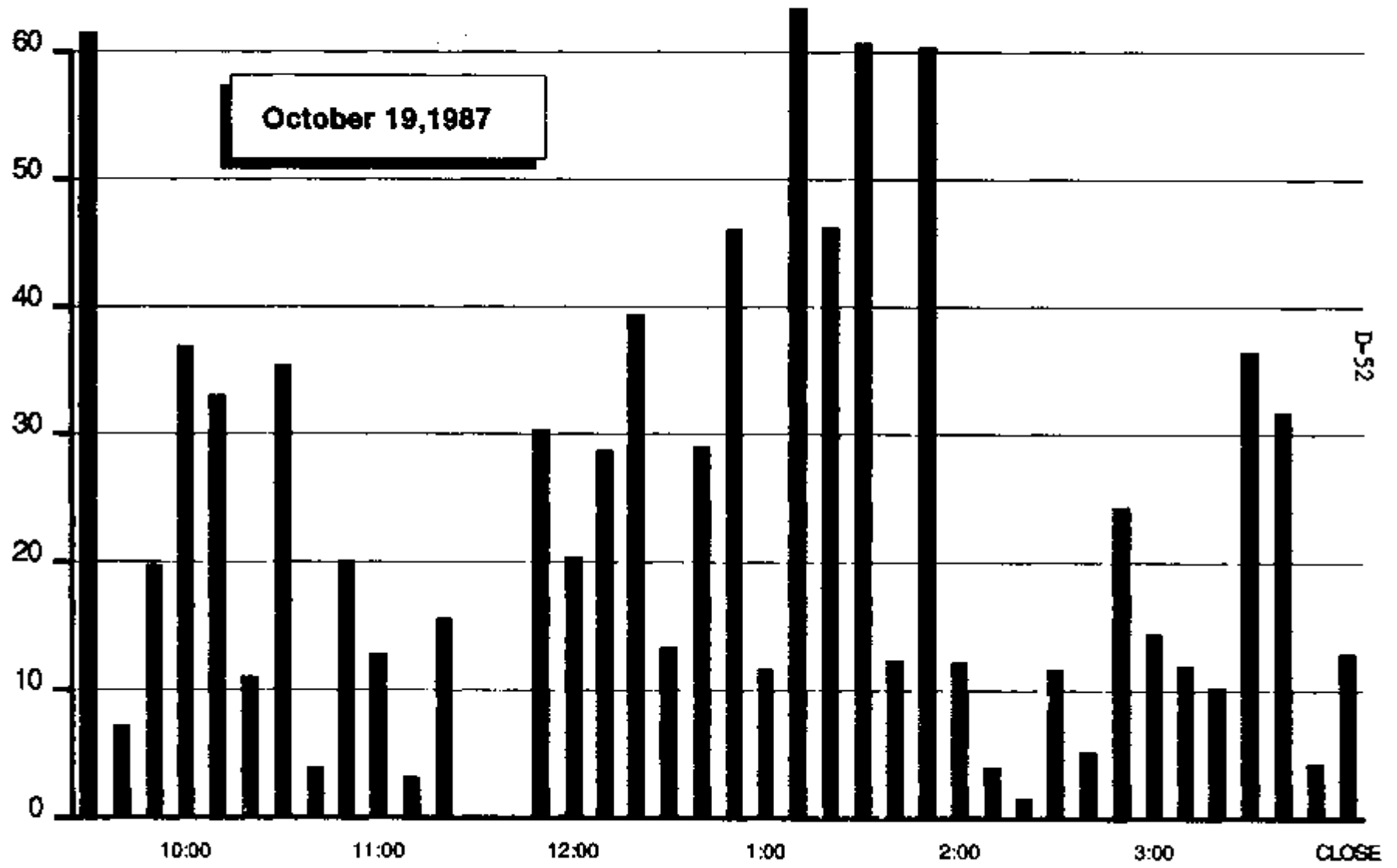
Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	1.8	0	0.3	2.9	5.0	36.4	61.5
9:40-9:50	0.4	0	0	0.5	0.9	4.9	7.2
9:50-10:00	2.6	0	0	0	2.6	14.0	19.8
10:00-10:10	3.7	0	0	0	3.7	22.9	36.9
10:10-10:20	3.6	0	0	0	3.6	22.7	33.0
10:20-10:30	1.1	0	0	0	1.1	7.5	11.1
10:30-10:40	1.1	0	2.7	0	3.7	24.7	35.4
10:40-10:50	0.6	0	0	0	0.6	3.0	3.9
10:50-11:00	0.5	0	2.7	0	3.1	15.5	20.1
11:00-11:10	0	0	2.0	0	2.0	10.0	12.8
11:10-11:20	0	0	0	0.5	0.5	2.5	3.2
11:20-11:30	0	0	2.4	0	2.4	12.0	15.6
11:30-11:40	0	0	0	0	0	0	0
11:40-11:50	0	0	0	0	0	0	0
11:50-12:00	0.9	0	2.0	0.6	3.5	23.9	30.4
12:00-12:10	1.6	0	0.5	0	2.1	14.9	20.3
12:10-12:20	0.6	0	2.2	0	2.8	21.4	28.8
12:20-12:30	1.1	0.5	2.0	0.6	4.2	30.9	39.5
12:30-12:40	1.1	0	0	0	1.1	7.2	13.3
12:40-12:50	1.1	0	1.3	0	2.4	20.7	29.1
12:50-1:00	1.1	0	3.0	0.02	4.1	29.9	46.1
1:00-1:10	1.0	0	0	0	1.0	6.6	11.6
1:10-1:20	0.6		4.0	0	4.6	35.9	63.4
1:20-1:30	2.7	0.5	0.1	0	3.3	35.5	46.3
1:30-1:40	1.6	0.5	5.0	0	7.1	39.9	60.7
1:40-1:50	0.2	0	1.0	0	1.2	9.0	12.4
1:50-2:00	0.7	0.5	2.9	0.1	4.2	29.7	60.4
2:00-2:10	0.3	0	0.7	0	1.0	8.6	12.2
2:10-2:20	0.3	0	0	0.1	0.5	3.7	4.0
2:20-2:30	0.1	0	0	0	0.1	1.1	1.6
2:30-2:40	0.4	0	0.3	0	0.8	7.8	11.6
2:40-2:50	0.2	0.2	0	0	0.4	3.7	5.2
2:50-3:00	0.7	0	0	1.7	2.5	16.1	24.3
3:00-3:10	0.4	0.6	0.6	0	1.7	10.7	14.4
3:10-3:20	0.4	0	0.6	0.3	1.2	8.7	12.0
3:20-3:30	0.7	0	0.5	0	1.1	6.9	10.3
3:30-3:40	0.2	0	1.0	2.3	3.6	24.1	36.5
3:40-3:50	0.2	0	1.6	2.0	3.7	22.5	31.8
3:50-4:00	0.1	0	0.6	0	0.7	3.0	4.3
4:00-CLOSE	0.8	0	0	0	0.8	8.4	12.5
ALL DAY	0.2	0	0	0.1	0.3		
TOTAL	34.7	2.8	39.9	11.8	89.3	14.7	21.1

Thirty Minute Breakdown of Index-Related Selling on NYSE (October 19, 1987)

Millions of Shares

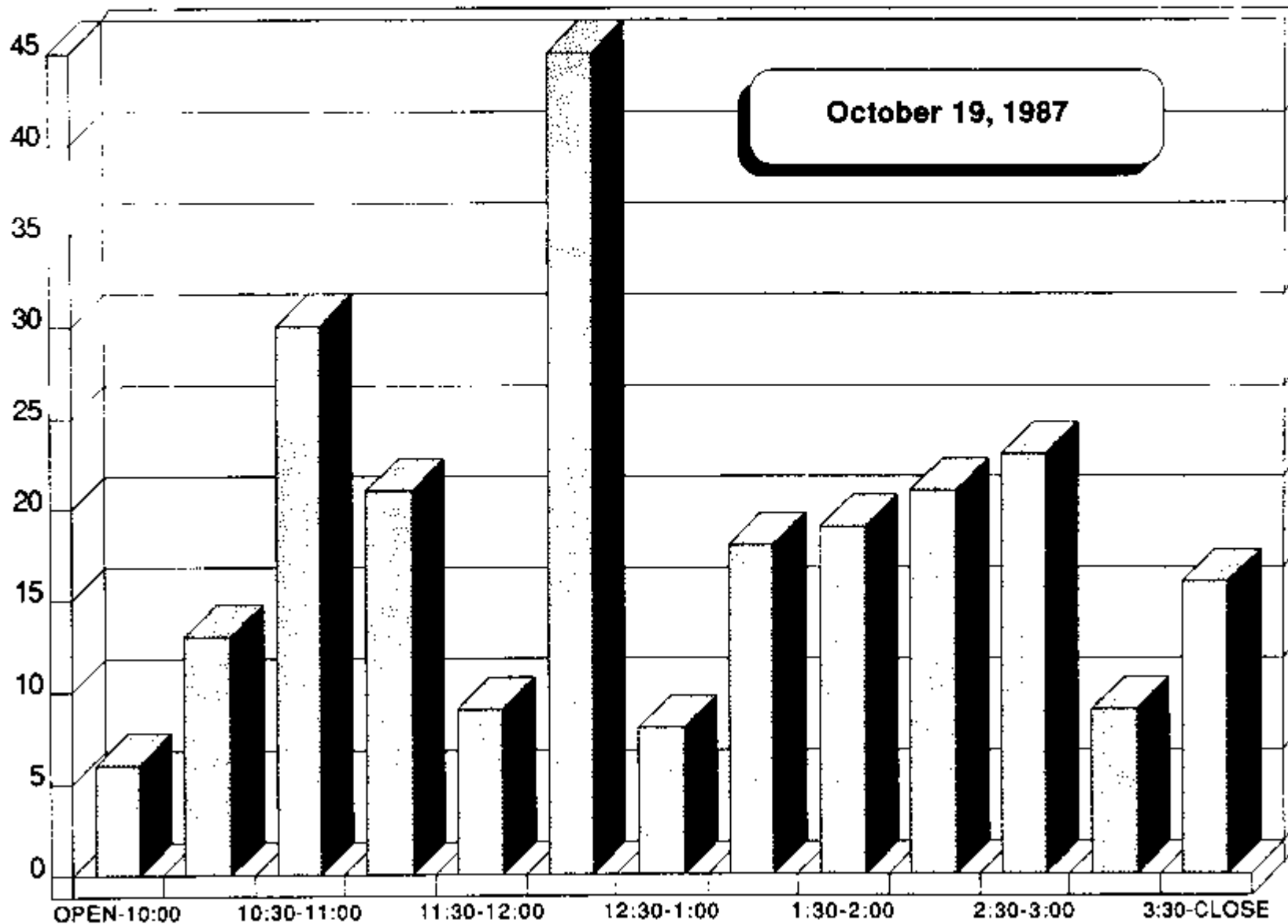


Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)



Portfolio Insurance Futures Selling Percentage of CME Volume

Percentage of
Total Volume

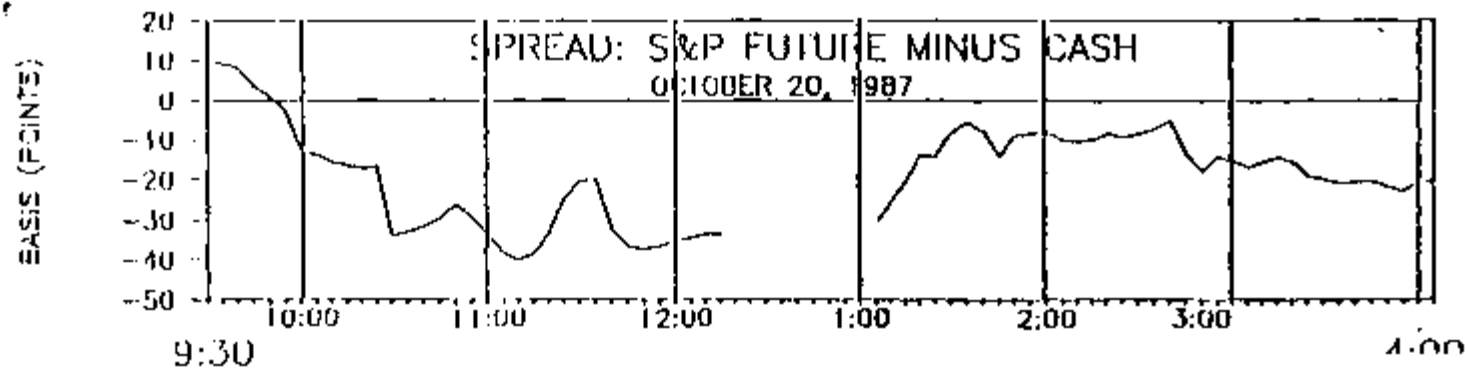
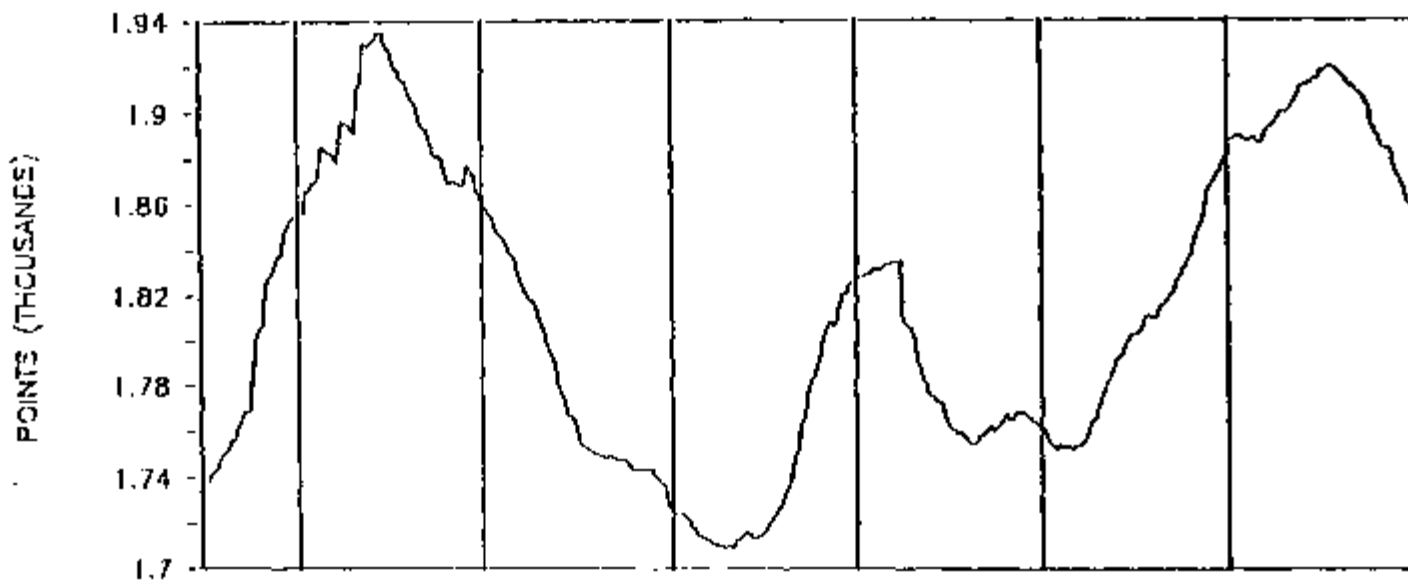


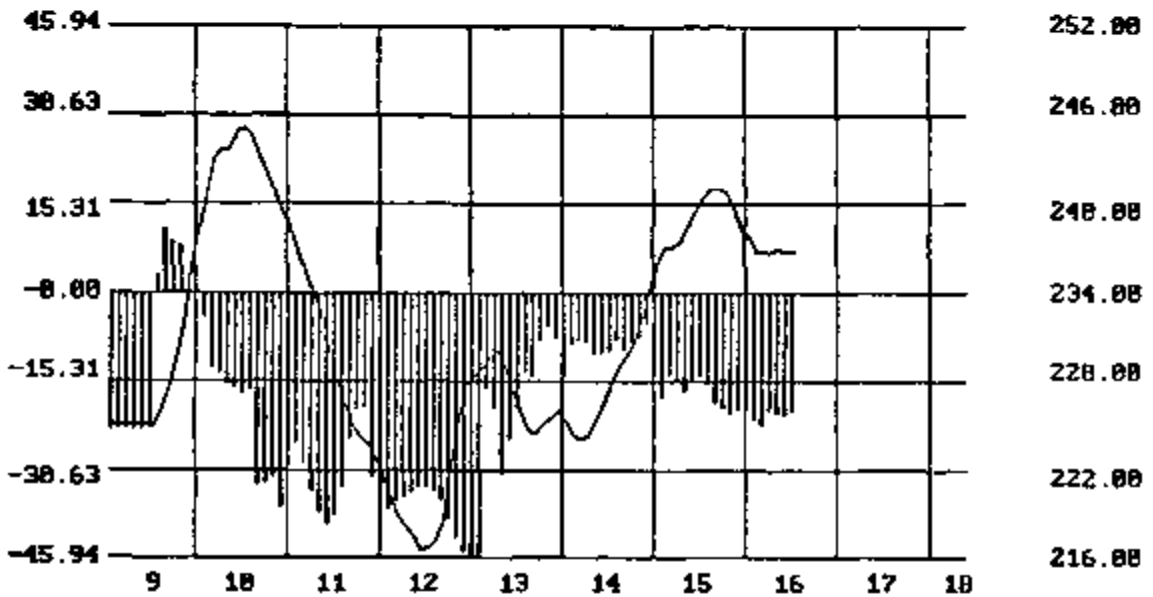
OCTOBER 20

DOW JONES INDUSTRIAL AVERAGE

OCTOBER 20, 1987: MINUTE BY MINUTE

SOURCE: NEW YORK STOCK EXCHANGE





TRADE DATE: OCTOBER 20, 1987

S&P 500 STOCK INDEX FUTURES (DEC) - "SPZ"
 BAR GRAPH/LEFT SCALE: FUTURES PREMIUM/DISCOUNT
 LINE GRAPH/RIGHT SCALE: CASH (STOCK) PRICES
 FOUR-MINUTE DATA
 SOURCE: BRIDGE INFORMATION SERVICES, INC.

THIRTY MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE

October 20, 1987

Time	NYSE Volume	S&P Volume	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Program Selling	% of NYSE Volume	% of S&P Volume
OPEN-10:00	62.6	41.2	0.2	0	0.5	1.9	2.6	4.2	6.3
10:00-10:30	73.2	52.7	0.4	0	0	0	0.4	0.5	0.8
10:30-11:00	63.9	46.3	0.9	0	0	1.1	2.0	3.1	4.3
11:00-11:30	60.6	44.0	0.2	0	6.3	0.9	7.4	12.2	16.8
11:30-12:00	52.0	32.5	0.6	0	0	0	0.6	1.5	1.8
12:00-12:30	38.3	24.6	0	0	0	0	0	0.0	0.0
12:30-1:00	46.7	34.4	0	0	0	0	0	0.0	0.0
1:00-1:30	39.6	28.7	0	0	0	0.7	0.7	1.8	2.4
1:30-2:00	30.5	21.7	0	0	2.1	0.3	2.4	7.9	11.1
2:00-2:30	30.5	21.5	0	0	1.1	2.2	3.3	10.8	15.4
2:30-3:00	33.3	23.7	0	0	0.5	0.7	1.2	3.6	5.1
3:00-3:30	39.5	26.8	0	0	0	0.3	0.3	0.8	1.1
3:30-Close	43.1	28.4	.67	0	0	1.0	1.7	3.9	6.0
ALL DAY			0	0.6	0	1.2	1.8		
TOTAL	613.7	426.7	2.97	0.6	10.5	10.3	24.4	4.0	5.7

Time — Order execution times were estimated by adding 5 minute execution periods to order entry times.

Volume — All volume figures are in millions of shares.

S&P Volume — NYSE volume in S&P Stocks.

Index Arbitrage — Includes designated arbitrage (customer or proprietary) plus "adjustments to hedges" if structured as arbitrage.

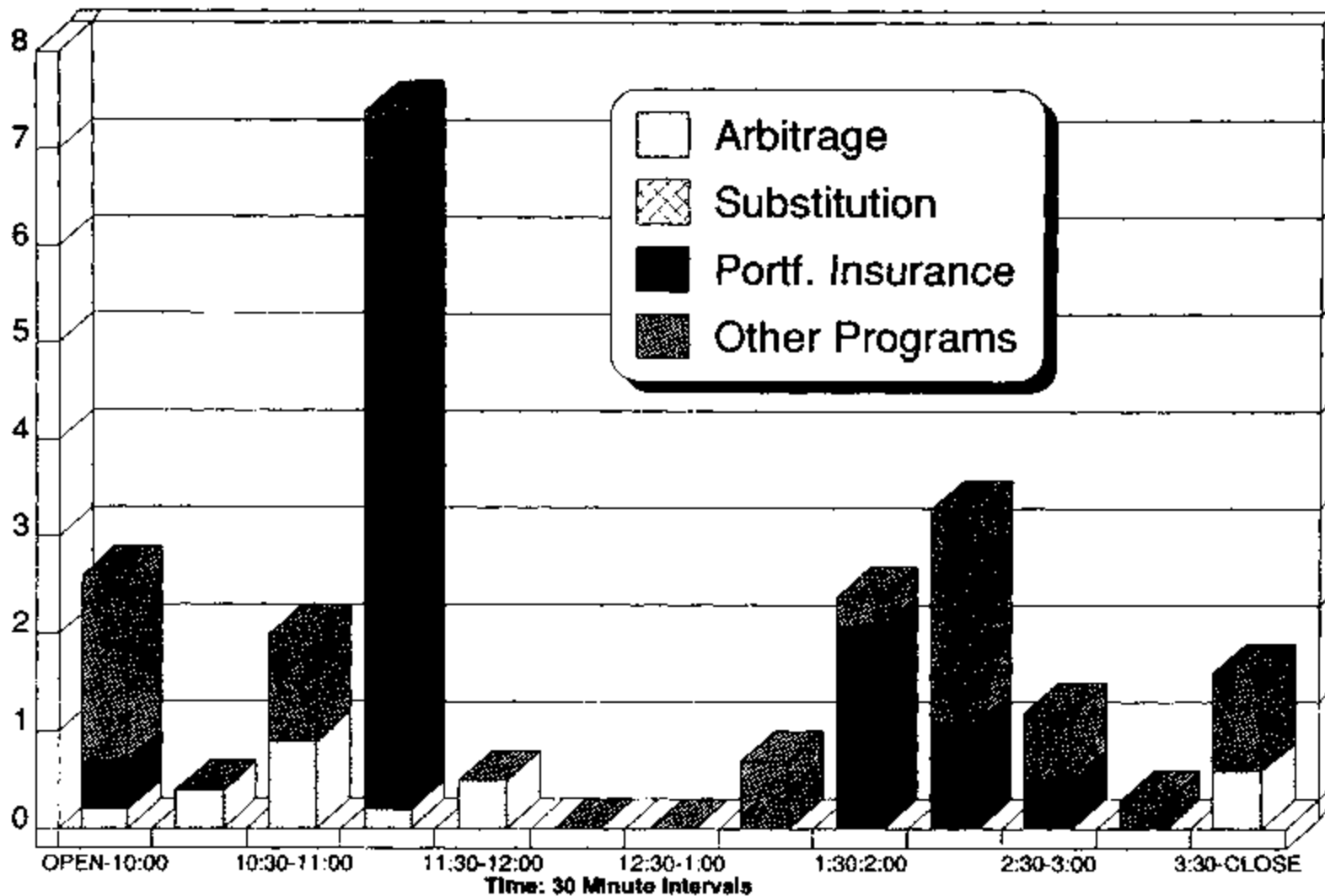
Rounding — Some figures are not arithmetic totals due to rounding.

TEN MINUTE BREAKDOWN OF INDEX-RELATED SELLING ON NYSE
October 20, 1987

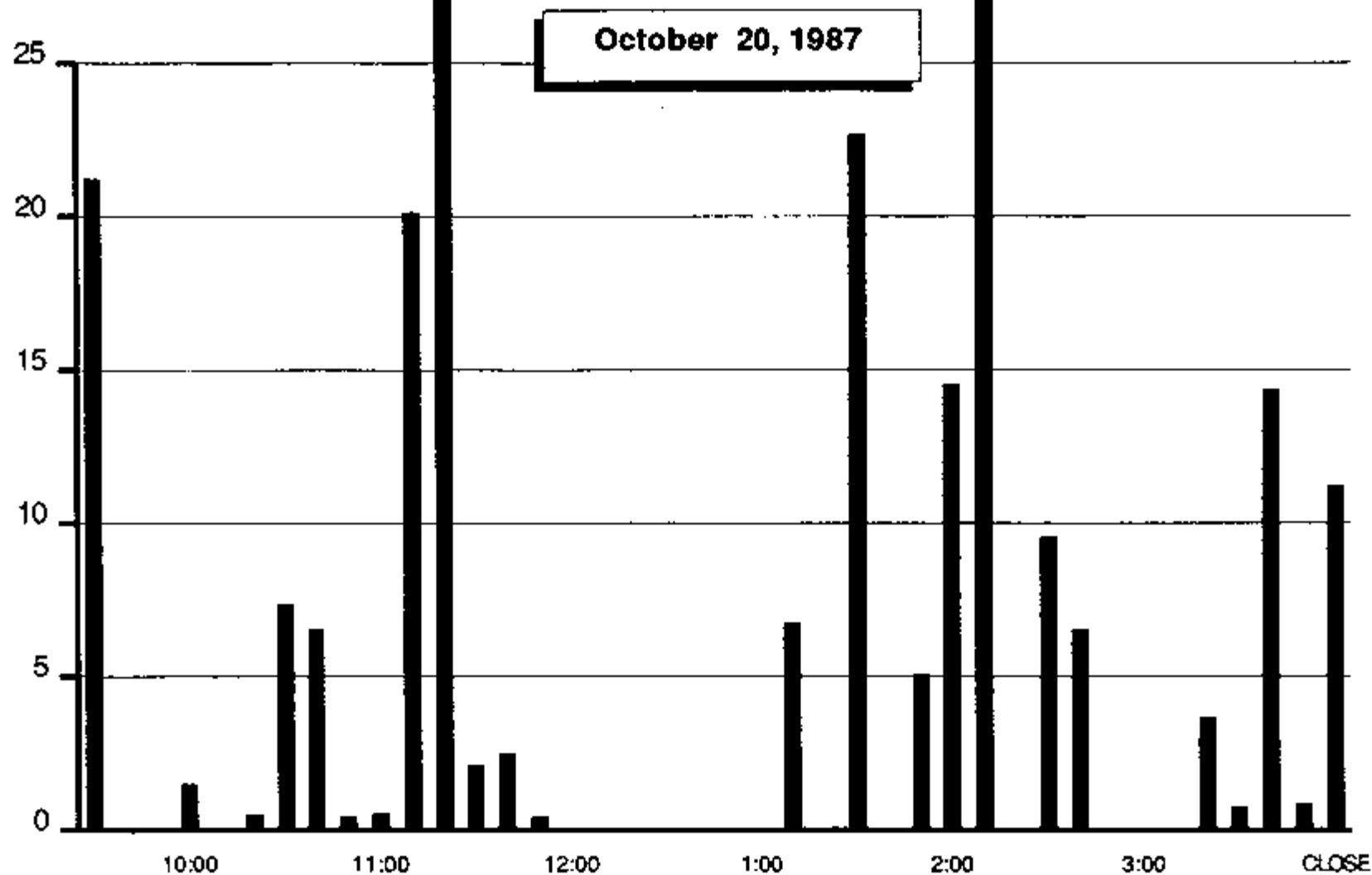
Time	Index Arbitrage	Index Substitution	Portfolio Insurance	Other Programs	Total Programs Selling	% of NYSE Volume	% of S&P Volume
OPEN-9:40	0.2	0	0.5	1.9	2.6	13.7	21.8
9:40-9:50	0	0	0	0	0	0	0
9:50-10:00	0	0	0	0	0	0	0
10:00-10:10	0.3	0	0	0	0.3	1.2	1.6
10:10-10:20	0	0	0	0	0	0	0
10:20-10:30	0.1	0	0	0	0.1	0.4	0.6
10:30-10:40	0.3	0	0	0.6	0.9	5.0	7.1
10:40-10:50	0.5	0	0	0.5	1.0	4.8	6.6
10:50-11:00	0.1	0	0	0	0.1	0.4	0.5
11:00-11:10	0.1	0	0	0	0.1	0.5	0.7
11:10-11:20	0.1	0	2.1	0.7	2.9	14.1	20.3
11:20-11:30	0	0	4.2	0.2	4.4	21.7	28.8
11:30-11:40	0.3	0	0	0	0.3	1.7	2.4
11:40-11:50	0.2	0	0	0	0.2	1.0	3.3
11:50-12:00	.07	0	0	0	0.1	0.7	0.7
12:00-12:10	0	0	0	0	0	0	0
12:10-12:20	0	0	0	0	0	0	0
12:20-12:30	0	0	0	0	0	0	0
12:30-12:40	0	0	0	0	0	0	0
12:40-12:50	0	0	0	0	0	0	0
12:50-1:00	0	0	0	0	0	0	0
1:00-1:10	0	0	0	0	0	0	0
1:10-1:20	0	0	0	0.7	0.7	5.2	7.3
1:20-1:30	0	0	0	0	0	0	0
1:30-1:40	0	0	2.1	0	2.1	16.4	22.6
1:40-1:50	0	0	0	0	0	0	0
1:50-2:00	0	0	0	0.3	0.3	3.1	4.3
2:00-2:10	0	0	1.1	0	1.1	10.4	15.1
2:10-2:20	0	0	0	2.2	2.2	21.0	29.7
2:20-2:30	0	0	0	0	0	0	0
2:30-2:40	0	0	0	0.7	0.7	6.7	9.6
2:40-2:50	0	0	0.5	0	0.5	4.5	6.2
2:50-3:00	0	0	0	0	0	0	0
3:00-3:10	0	0	0	0	0	0	0
3:10-3:20	0	0	0	0	0	0	0
3:20-3:30	0	0	0	0.3	0.3	2.2	3.2
3:30-3:40	.07	0	0	0	0.1	0.9	1.2
3:40-3:50	0.1	0	0	1.0	1.1	9.4	13.7
3:50-4:00	0.1	0	0	0	0.1	0.7	1.1
4:00-CLOSE	0.4	0	0	0	0.4	7.3	12.1
ALL DAY	0	0.6	0	1.2	1.8		
TOTAL	2.3	0.6	10.4	10.3	24.4	4.0	5.7

Thirty Minute Breakdown of Index-Related Selling on NYSE (October 20, 1987)

Millions of Shares



Total Program Selling on NYSE as % of Volume in S&P Stocks (10 Minute Intervals)



Portfolio Insurance Futures Selling Percentage of CME Volume

Percentage of
Total Volume

