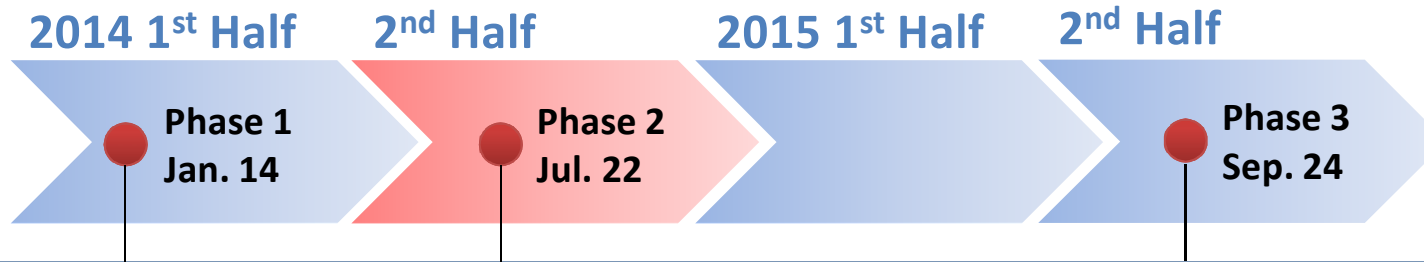


Trading Conditions of TOPIX100 Constituents after Tick Size Pilot Program Phases 1 & 2



16 December 2014
Tokyo Stock Exchange

1. Outline



Tick Size Pilot Program

- Reduce tick sizes in TOPIX 100 constituents in two phases.
 - ✓ **Phase 1:** Reduce tick sizes for stocks priced above JPY 3,000.
 - ✓ **Phase 2:** Introduce decimal tick sizes (JPY 0.1 or JPY 0.5) for stocks priced under JPY 5,000.

Phase 1

Quote Range (JPY)		Normal Tick Size (JPY)	Phase 1 Tick Size (JPY)
Over	Less Than		
3,000	5,000	5	1
5,000	10,000	10	1
10,000	30,000	10	5

Phase 2

Quote Range (JPY)		Phase 1 Tick Size(JPY)	Phase 2 Tick Size (JPY)
Over	Less Than		
1	1,000	1	0.1
1,000	3,000	1	0.5
3,000	5,000	1	0.5

- ✓ **Phase 3:** Review Phase 1 & 2 impact and finalize new tick size table.

2. Changes in the Order Book

- ✓ Quoted spread narrowed and price improvements observed.
- ✓ Quotes in the order book are dispersed across a large number of smaller ticks.

Mizuho Financial Group (8411)
2014/07/18 14:50:00

SELL	PRICE	BUY
468,768	▲OVER	
77,264	209.0	
87,374	208.0	
61,026	207.0	
75,884	206.0	
82,326	205.0	
68,000	204.0	
110,868	203.0	
147,046	202.0	
114,048	201.0	
	200.0	425,569
	199.0	245,910
	198.0	234,691
	197.0	85,330
	196.0	63,191
	195.0	70,500
	194.0	27,929
	193.0	20,995
	▼UNDER	58,333

Phase 2

Mizuho Financial Group (8411)
2014/07/22 09:10:00

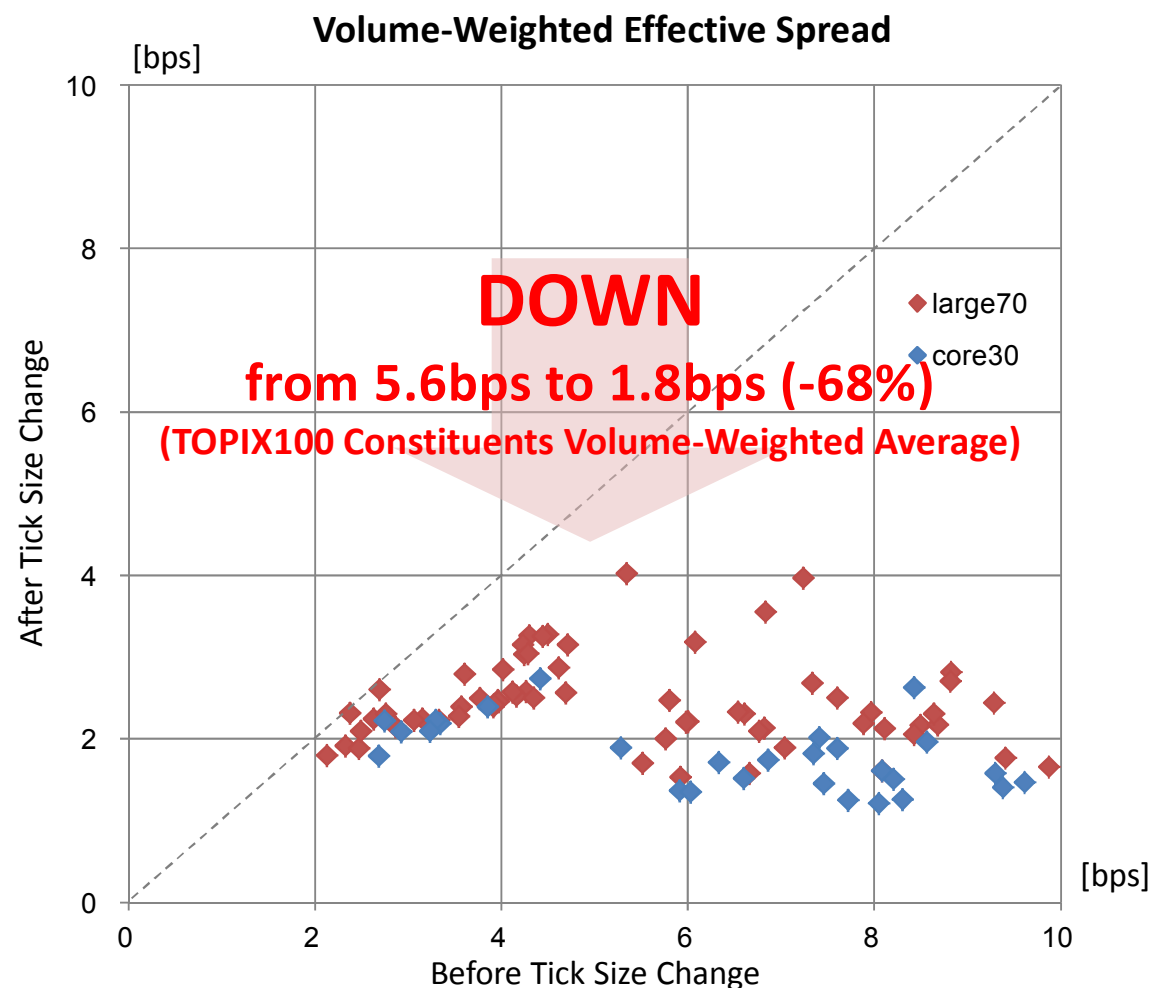
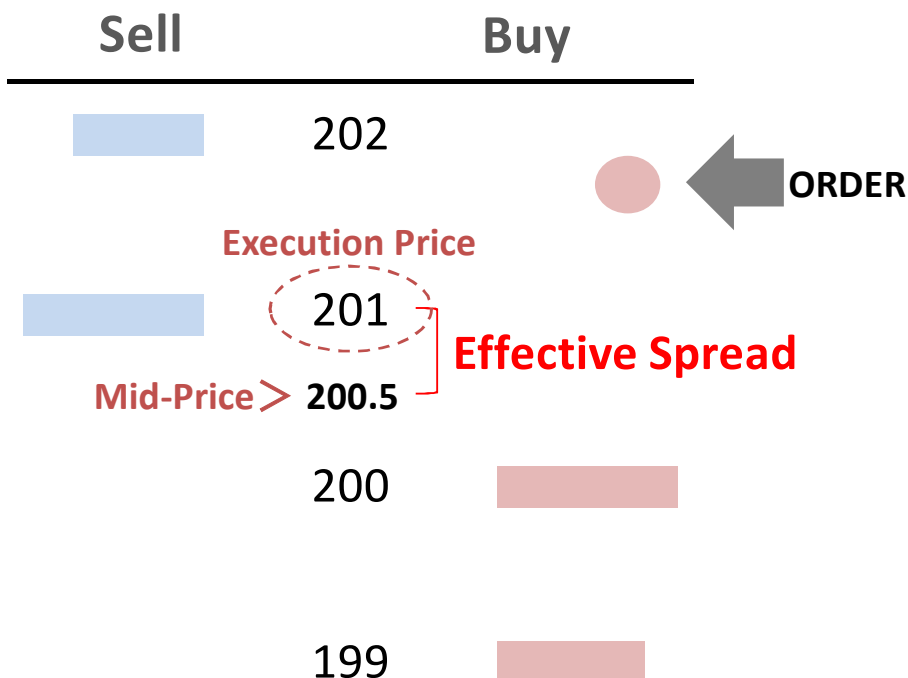
SELL	PRICE	BUY
839,786	▲OVER	
1,352	201.3	
2,068	201.2	
856	201.1	
19,696	201.0	
3,822	200.9	
4,735	200.8	
3,192	200.7	
2,479	200.6	
	200.5	5,753
	200.4	5,216
	200.3	4,785
	200.2	9,425
	200.1	22,599
	200.0	162,614
	199.9	1,332
	199.8	1,282
	199.7	1,758
	▼UNDER	413,805

*Order volumes per trading unit (1 trading unit: 100 shares)

3. Effective Spread Reduction and Price Improvement

- ✓ Effective spread, or spread cost actually borne by investors, has decreased significantly.
- ✓ The total spread cost in TOPIX 100 constituents has dropped by 3.8bps. (JPY 99.2 billion on an annual basis.)

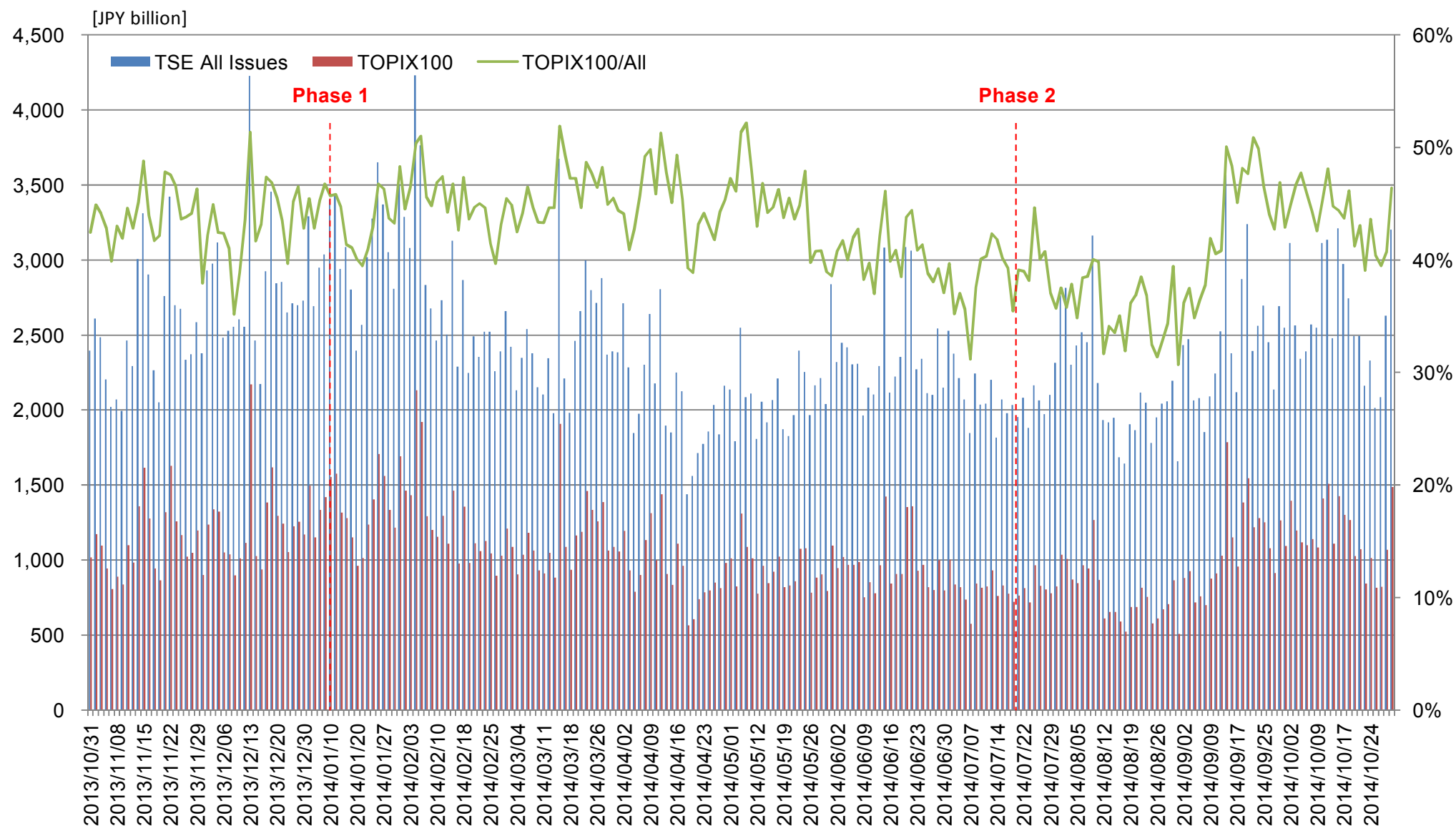
Definition of Effective Spread



- “Volume-Weighted Effective Spread” is the spread between the execution price and BBO mid-price (immediately prior to execution) averaged by the volume weight of the number of executed shares. Denominator of the spread calculation is the mid-price. All executions during continuous auction are included in the calculation.
- For orders executed at more than one price, the volume-weighted price is used as the execution price.

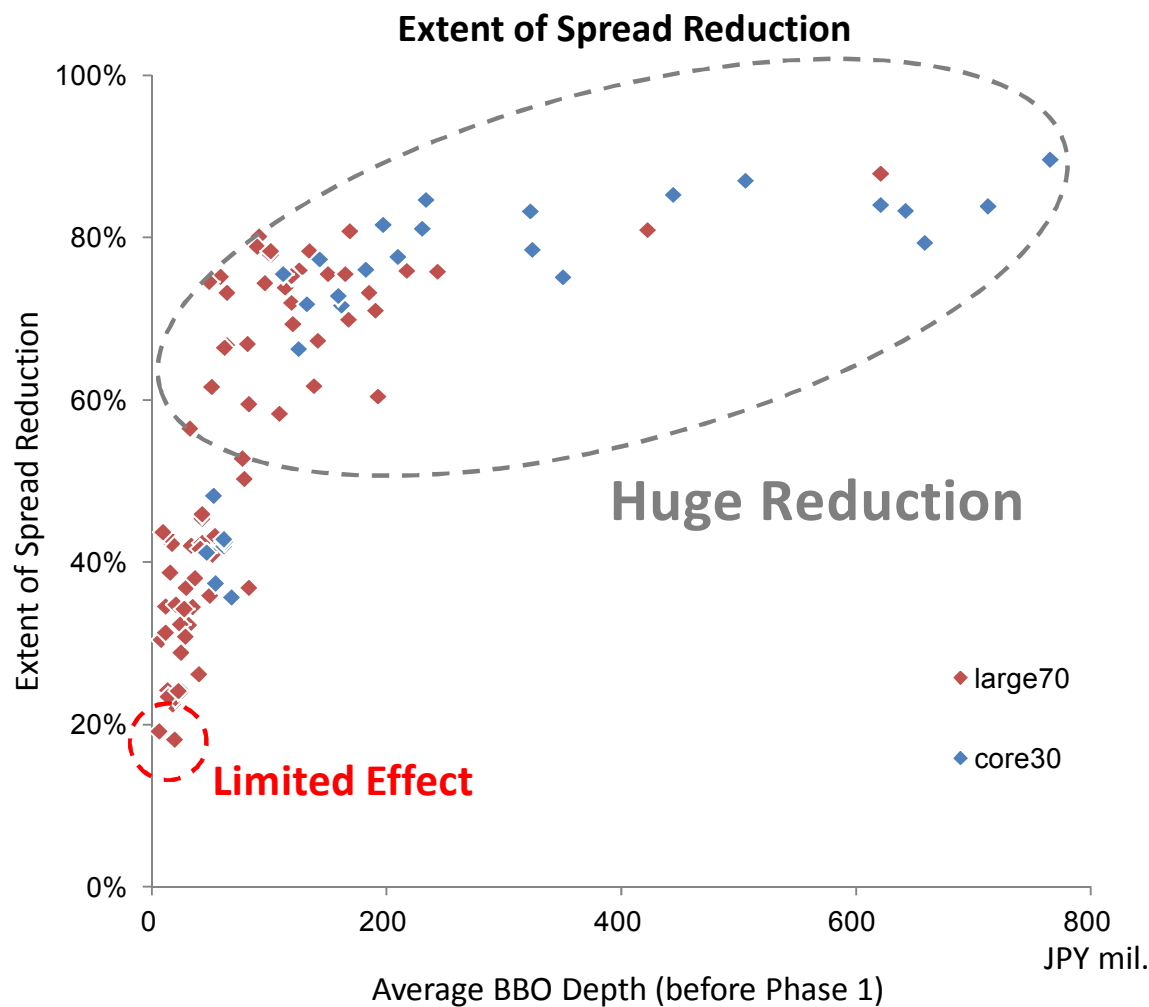
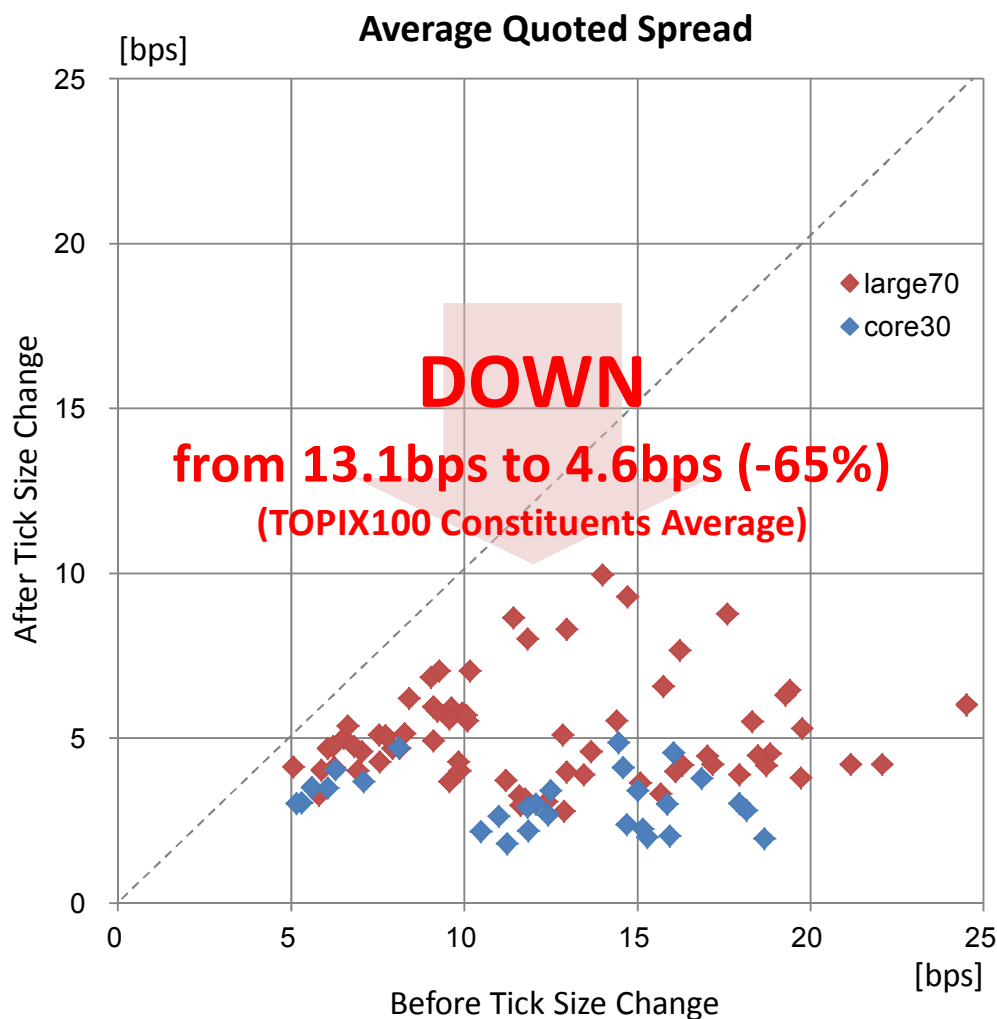
4. Transition of Trading Value

- ✓ No significant change in share of TOPIX100 trading value near the start of both Phases 1 and 2.
- ✓ Trading cost reductions were achieved with high liquidity.



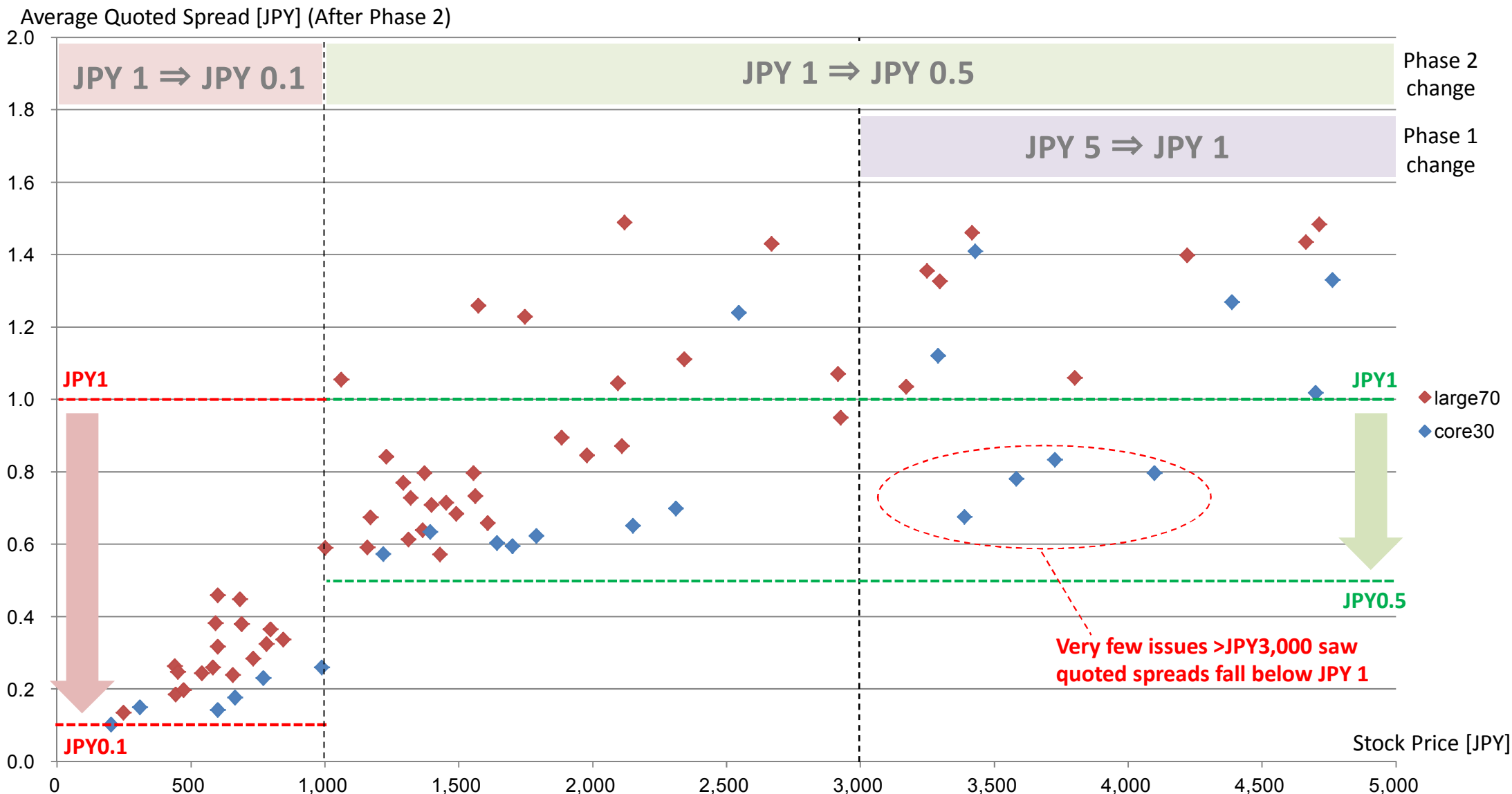
5. Comparison between Quoted Spread Change and BBO Depth

- ✓ Average quoted spread decreased across all TOPIX 100 constituents.
- ✓ The more liquid an issue, the more significant the spread reduction.



6. Quoted Spread at Price Band with Sub-yen Tick Sizes

- ✓ Quoted spreads fell below JPY 1 for all issues priced under JPY 1,000.
- ✓ Only a few issues priced between JPY 3,000 and JPY 5,000 saw the same effect.



[Appendix] Proposed Plan for Phase 3

<Phase 3 Plan>

Phase 3 Issues	As is the case with Phases 1 and 2, the small tick sizes will only be applied to TOPIX100 constituents.
Tick Size Revision	The tick size for prices above JPY 3,000 but JPY 5,000 or less will be changed to JPY 1 (currently, JPY 0.5). (Tick sizes for price bands at tenfold increments (e.g., above JPY 30,000 but JPY 50,000 or less) will be similarly revised to the next larger tick size.)

<Tick Size>

Price(JPY)		Other Issues	TOPIX100 Constituents Phase 1	TOPIX100 Constituents Phase 2	TOPIX100 Constituents Phase 3
More than	Up to				
	1,000	1	1	0.1	0.1
1,000	3,000	1	1	0.5	0.5
3,000	5,000	5	1	0.5	<u>1</u>
5,000	10,000	10	1	1	1
10,000	30,000	10	5	5	5
30,000	50,000	50	5	5	<u>10</u>
50,000	100,000	100	10	10	10

[Appendix] TOPIX100 Constituents (as of Dec. 1, 2014)

... Core30
... Large70

No.	Code	Name	Price	No.	Code	Name	Price	No.	Code	Name	Price	No.	Code	Name	Price
1	8411	Mizuho FG	204.3	26	8053	SUMITOMO	1,260.5	51	5411	JFE Holdings	2,588.0	76	8316	Sumitomo Mitsui FG	4,477.5
2	9202	ANA HOLDINGS	303.8	27	7752	RICOH	1,279.5	52	9064	YAMATO HOLDINGS	2,588.0	77	4502	Takeda	5,015
3	5401	Nippon Steel & Sumitomo Metal	308.4	28	8001	ITOCHU	1,370.5	53	6758	SONY	2,640.0	78	6902	DENSO	5,683
4	5020	JX Holdings	437.1	29	9502	Chubu Electric Power	1,416.0	54	8802	Mitsubishi Estate	2,685.0	79	9021	JR West	5,712
5	9532	OSAKA GAS	455.9	30	6503	Mitsubishi Electric	1,438.5	55	8113	UNICHARM	2,762.0	80	6971	KYOCERA	5,824
6	8309	Sumitomo Mitsui Trust	494.0	31	8795	T&D Holdings	1,458.0	56	6301	KOMATSU	2,789.0	81	9432	NTT	6,230
7	6502	TOSHIBA	531.0	32	7202	ISUZU MOTORS	1,528.5	57	8725	MS&AD Insurance Group	2,830.0	82	6988	NITTO DENKO	6,272
8	4188	Mitsubishi Chemical	626.8	33	2503	Kirin Holdings	1,542.5	58	8630	NKSJ Holdings	3,027.5	83	9735	SECOM	6,873
9	8308	Resona Holdings	639.3	34	6752	Panasonic	1,554.0	59	7261	Mazda	3,147.0	84	7203	TOYOTA	7,429
10	9531	TOKYO GAS	649.7	35	8591	ORIX	1,565.5	60	8801	Mitsui Fudosan	3,430.0	85	9433	KDDI	7,544
11	8332	The Bank of Yokohama	669.3	36	5802	Sumitomo Electric Industries	1,579.0	61	7267	HONDA	3,595.5	86	6594	NIDEC	7,949
12	6702	FUJITSU	684.8	37	1928	Sekisui House	1,606.0	62	2502	Asahi Group	3,739.0	87	9984	SoftBank	7,966
13	8306	Mitsubishi UFJ FG	690.0	38	8031	mitsui & co.,	1,612.0	63	4578	Otsuka	3,785.5	88	6367	DAIKIN	8,090
14	7011	Mitsubishi Heavy Industries	695.1	39	4755	Rakuten	1,634.5	64	2914	JAPAN TOBACCO	3,798.0	89	4063	Shin-Etsu	8,118
15	8604	Nomura Holdings	718.8	40	4503	Astellas Pharma	1,713.5	65	7269	SUZUKI MOTOR	3,853.0	90	8035	Tokyo Electron	8,294
16	8002	Marubeni	745.7	41	5713	Sumitomo Metal Mining	1,739.5	66	7751	CANON	3,906.0	91	9020	JR East	8,954
17	6501	Hitachi	920.1	42	8750	The Dai-ichi Life Insurance	1,744.0	67	8766	Tokio Marine	3,970.5	92	6981	MURATA	12,980
18	3402	TORAY INDUSTRIES	933.0	43	4911	Shiseido	1,764.5	68	4901	FUJIFILM Holdings	3,980.5	93	1878	DAITO TRUST	13,600
19	8601	Daiwa Securities	959.3	44	4568	DAIICHI SANKYO	1,780.5	69	5108	BRIDGESTONE	4,122.0	94	7974	Nintendo	14,130
20	3407	ASAHI KASEI	1,038.5	45	9437	NTT DOCOMO	1,866.0	70	8830	Sumitomo R&D	4,156.5	95	9022	JR Central	17,515
21	7912	Dai Nippon Printing	1,055.0	46	6326	KUBOTA	1,874.0	71	4523	Eisai	4,282.0	96	6954	FANUC	20,260
22	7201	NISSAN MOTOR	1,105.0	47	8058	Mitsubishi	2,222.0	72	7741	HOYA	4,293.0	97	4661	ORIENTAL LAND	26,190
23	8267	AEON CO.,	1,200.0	48	2802	Ajinomoto Co.,	2,232.5	73	7270	Fuji Heavy Industries	4,381.0	98	6273	SMC CORP	32,610
24	9503	The Kansai Electric Power	1,209.5	49	1925	DAIWA HOUSE	2,282.5	74	4452	Kao Corp	4,440.0	99	9983	FAST RETAILING	43,425
25	1605	INPEX	1,219.0	50	1963	JGC	2,555.0	75	3382	Seven & I HD	4,456.0	100	6861	KEYENCE	55,520

[Note] Prices are base prices on Dec. 1, 2014.