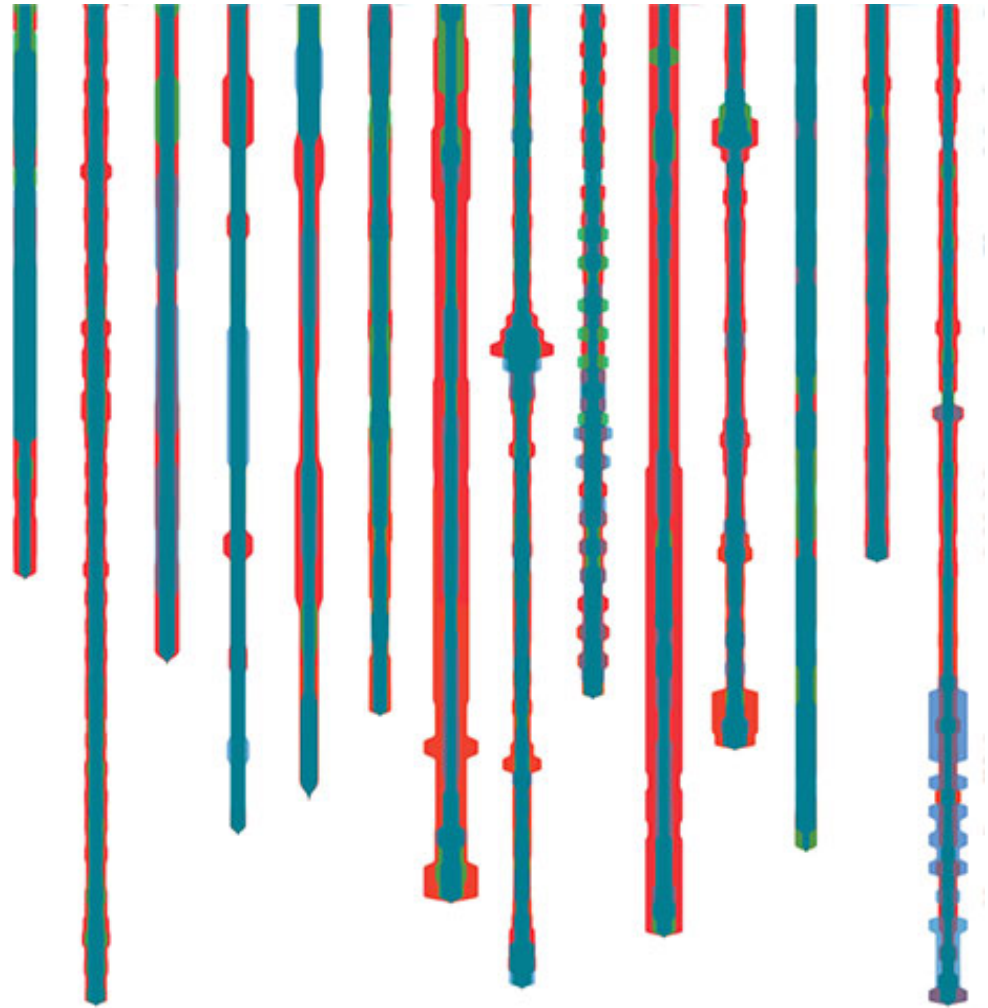


# Global Cost Review

Q4/2018

Results as of 02/04/2019



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## Average Regional Commission by Market Capitalization

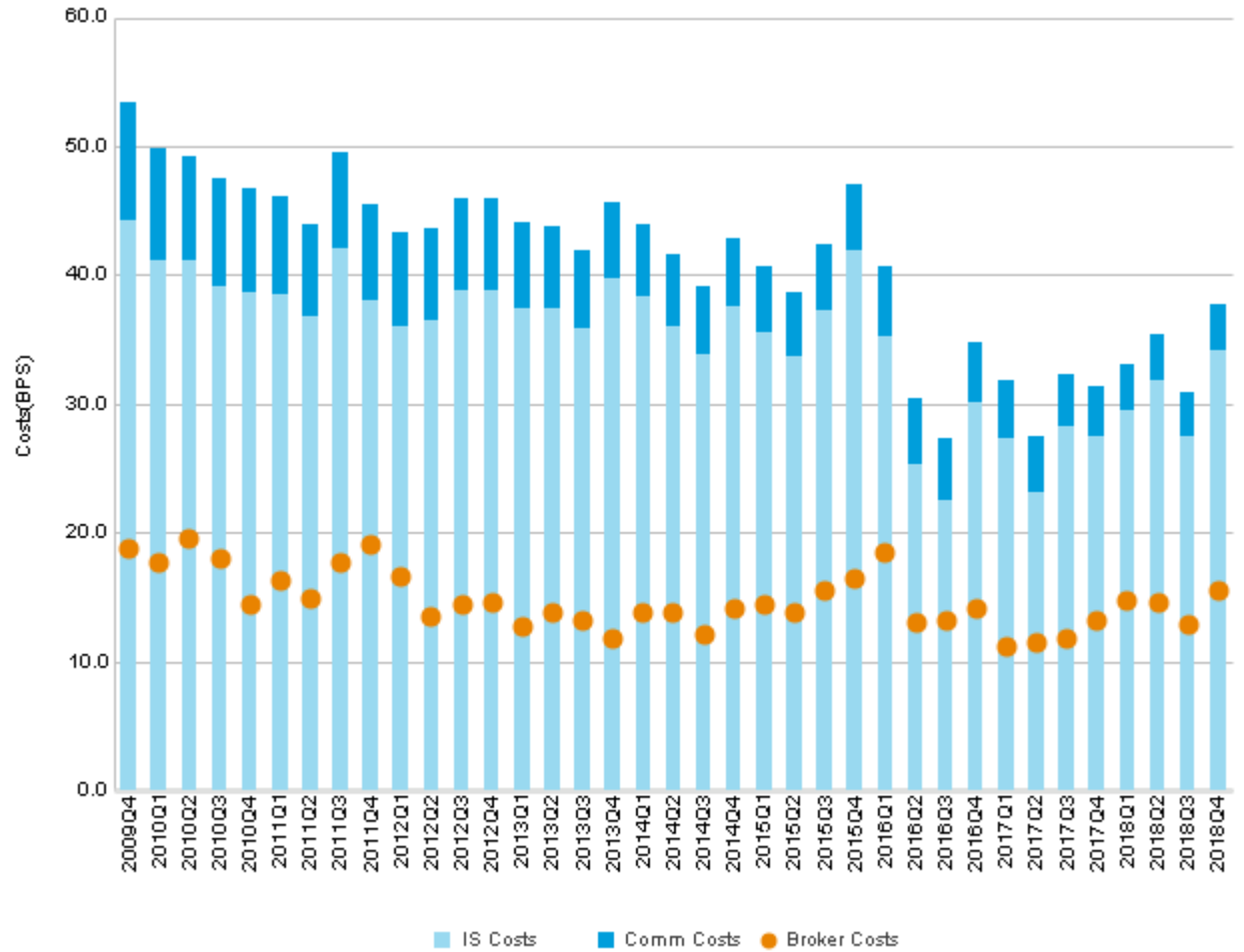
Region		Avg. Commission (BPS)				
		2018Q4	2018Q3	2018Q2	2018Q1	1Q18-4Q18
United States	Micro Cap	14.1	10.5	12.7	15.2	12.9
	Small Cap	10.0	10.2	9.6	11.1	10.1
	Mid Cap	5.7	5.3	5.5	5.9	5.6
	Large Cap	3.0	3.0	3.1	3.1	3.0
	<b>Total</b>	<b>3.5</b>	<b>3.4</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>
United Kingdom	Micro Cap	7.3	6.4	7.1	7.5	7.1
	Small Cap	7.3	7.8	7.9	7.4	7.6
	Mid Cap	5.5	5.6	6.0	5.9	5.7
	Large Cap	4.9	5.2	5.4	5.7	5.3
	<b>Total</b>	<b>5.1</b>	<b>5.3</b>	<b>5.5</b>	<b>5.8</b>	<b>5.4</b>
Japan	Micro Cap	4.9	4.3	4.3	4.6	4.5
	Small Cap	4.5	4.2	4.4	5.1	4.6
	Mid Cap	4.7	4.8	4.7	4.7	4.8
	Large Cap	5.0	5.0	5.1	4.9	5.0
	<b>Total</b>	<b>4.9</b>	<b>5.0</b>	<b>5.0</b>	<b>4.9</b>	<b>5.0</b>
Canada	Micro Cap	15.2	13.4	12.9	16.0	14.1
	Small Cap	15.8	16.8	15.5	18.7	16.2
	Mid Cap	11.1	10.5	11.0	12.1	11.1
	Large Cap	5.1	4.7	5.3	5.2	5.1
	<b>Total</b>	<b>7.1</b>	<b>6.7</b>	<b>7.6</b>	<b>7.7</b>	<b>7.2</b>
Europe ex UK	Micro Cap	5.1	5.0	5.1	4.2	4.8
	Small Cap	7.0	6.3	6.5	6.2	6.5
	Mid Cap	5.2	5.0	5.5	5.6	5.3
	Large Cap	4.7	4.8	5.2	5.1	5.0
	<b>Total</b>	<b>4.8</b>	<b>4.9</b>	<b>5.2</b>	<b>5.2</b>	<b>5.0</b>
Asia Pacific ex Japan	Micro Cap	10.2	9.1	11.1	10.5	10.2
	Small Cap	7.8	8.5	9.2	10.1	8.8
	Mid Cap	7.7	7.8	7.5	8.0	7.7
	Large Cap	7.0	7.3	6.9	7.2	7.1
	<b>Total</b>	<b>7.2</b>	<b>7.4</b>	<b>7.0</b>	<b>7.3</b>	<b>7.3</b>
Emerging Markets	Micro Cap	11.0	14.9	10.7	12.4	12.7
	Small Cap	8.6	8.3	9.4	10.5	9.1
	Mid Cap	9.4	9.2	10.0	10.7	9.8
	Large Cap	9.5	9.3	9.9	10.2	9.7
	<b>Total</b>	<b>9.5</b>	<b>9.3</b>	<b>9.9</b>	<b>10.3</b>	<b>9.8</b>

Region		Avg. Commission (BPS)				
		2018Q4	2018Q3	2018Q2	2018Q1	1Q18-4Q18
Emerging Asia	Micro Cap	10.8	15.1	10.1	11.9	12.6
	Small Cap	8.0	7.8	8.8	9.4	8.4
	Mid Cap	8.7	8.8	9.4	9.9	9.2
	Large Cap	9.1	9.1	9.5	10.0	9.4
	<b>Total</b>	<b>9.0</b>	<b>9.0</b>	<b>9.5</b>	<b>10.0</b>	<b>9.4</b>
Emerging Europe	Micro Cap	9.5	10.4	11.6	8.8	10.1
	Small Cap	8.3	9.9	9.8	9.4	9.3
	Mid Cap	9.3	8.9	9.1	10.9	9.4
	Large Cap	8.8	8.1	9.3	10.0	9.1
	<b>Total</b>	<b>9.0</b>	<b>8.5</b>	<b>9.3</b>	<b>10.2</b>	<b>9.2</b>
Latin America	Micro Cap	8.1	8.8	8.5	15.1	9.9
	Small Cap	9.6	9.8	10.8	17.0	11.2
	Mid Cap	10.6	10.0	11.3	12.0	11.0
	Large Cap	10.1	9.4	11.4	11.1	10.7
	<b>Total</b>	<b>10.2</b>	<b>9.6</b>	<b>11.3</b>	<b>11.4</b>	<b>10.8</b>
Middle East and Africa	Micro Cap	21.4	23.3	21.7	21.7	21.9
	Small Cap	14.8	12.9	16.9	20.8	16.3
	Mid Cap	11.2	11.4	12.4	13.4	12.1
	Large Cap	11.3	10.7	11.1	10.3	10.8
	<b>Total</b>	<b>11.3</b>	<b>10.9</b>	<b>11.5</b>	<b>11.2</b>	<b>11.2</b>

Region		Avg. Commission (CPS)				
		2018Q4	2018Q3	2018Q2	2018Q1	1Q18-4Q18
United States	Micro Cap	0.8	1.2	0.8	1.0	1.0
	Small Cap	1.1	1.1	1.0	1.1	1.1
	Mid Cap	1.4	1.4	1.4	1.5	1.4
	Large Cap	1.7	1.8	1.9	1.9	1.8
	<b>Total</b>	<b>1.6</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>
Canada	Micro Cap	0.8	0.4	1.0	0.7	0.7
	Small Cap	1.0	0.8	1.2	1.0	0.9
	Mid Cap	1.5	1.2	1.3	1.3	1.2
	Large Cap	2.0	1.5	1.7	1.7	1.6
	<b>Total</b>	<b>1.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>

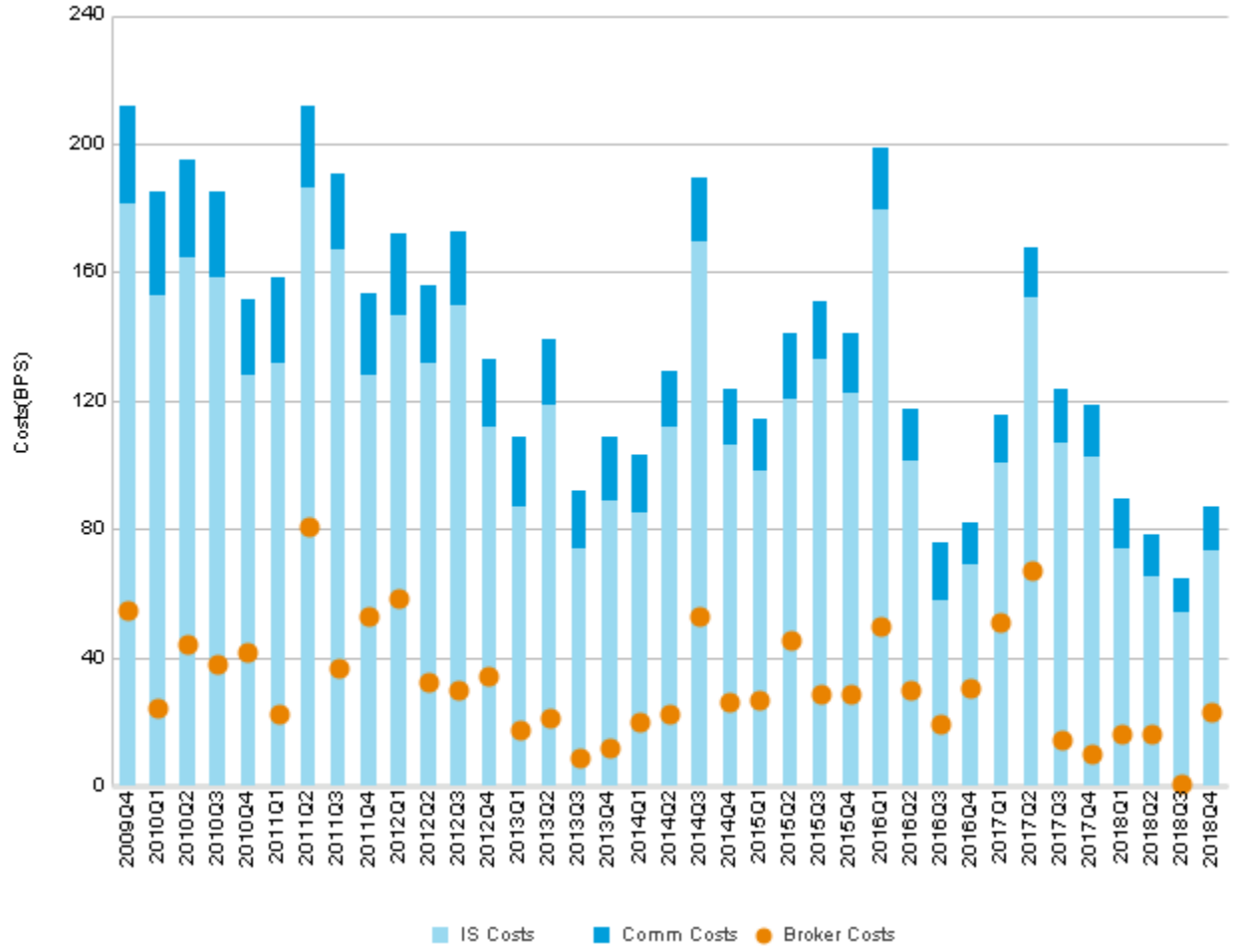
# United States(BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	44.3	9.1	53.4	18.8
2010Q1	41.1	8.8	49.9	17.7
2010Q2	41.1	8.2	49.3	19.6
2010Q3	39.2	8.4	47.3	18.1
2010Q4	38.7	8.1	46.7	14.4
2011Q1	38.6	7.5	46.1	16.4
2011Q2	36.8	7.2	43.9	14.9
2011Q3	42.1	7.5	49.6	17.7
2011Q4	38.0	7.5	45.5	19.1
2012Q1	36.0	7.3	43.2	16.6
2012Q2	36.5	7.2	43.7	13.6
2012Q3	38.9	7.1	46.1	14.5
2012Q4	38.8	7.2	45.9	14.6
2013Q1	37.5	6.6	44.1	12.7
2013Q2	37.5	6.3	43.7	13.8
2013Q3	35.9	6.1	42.0	13.3
2013Q4	39.8	5.8	45.5	11.9
2014Q1	38.3	5.6	43.9	13.8
2014Q2	36.1	5.6	41.7	13.8
2014Q3	33.8	5.4	39.2	12.1
2014Q4	37.6	5.3	42.9	14.2
2015Q1	35.6	5.0	40.6	14.5
2015Q2	33.7	5.1	38.7	13.8
2015Q3	37.3	5.1	42.4	15.5
2015Q4	42.0	5.1	47.1	16.5
2016Q1	35.3	5.3	40.7	18.6
2016Q2	25.4	5.1	30.5	13.0
2016Q3	22.5	4.8	27.4	13.2
2016Q4	30.1	4.7	34.8	14.1
2017Q1	27.4	4.4	31.9	11.2
2017Q2	23.2	4.4	27.5	11.5
2017Q3	28.3	4.0	32.3	11.9
2017Q4	27.5	4.0	31.4	13.3
2018Q1	29.6	3.5	33.1	14.8
2018Q2	31.9	3.5	35.4	14.7
2018Q3	27.5	3.4	30.9	12.9
2018Q4	34.2	3.5	37.7	15.6



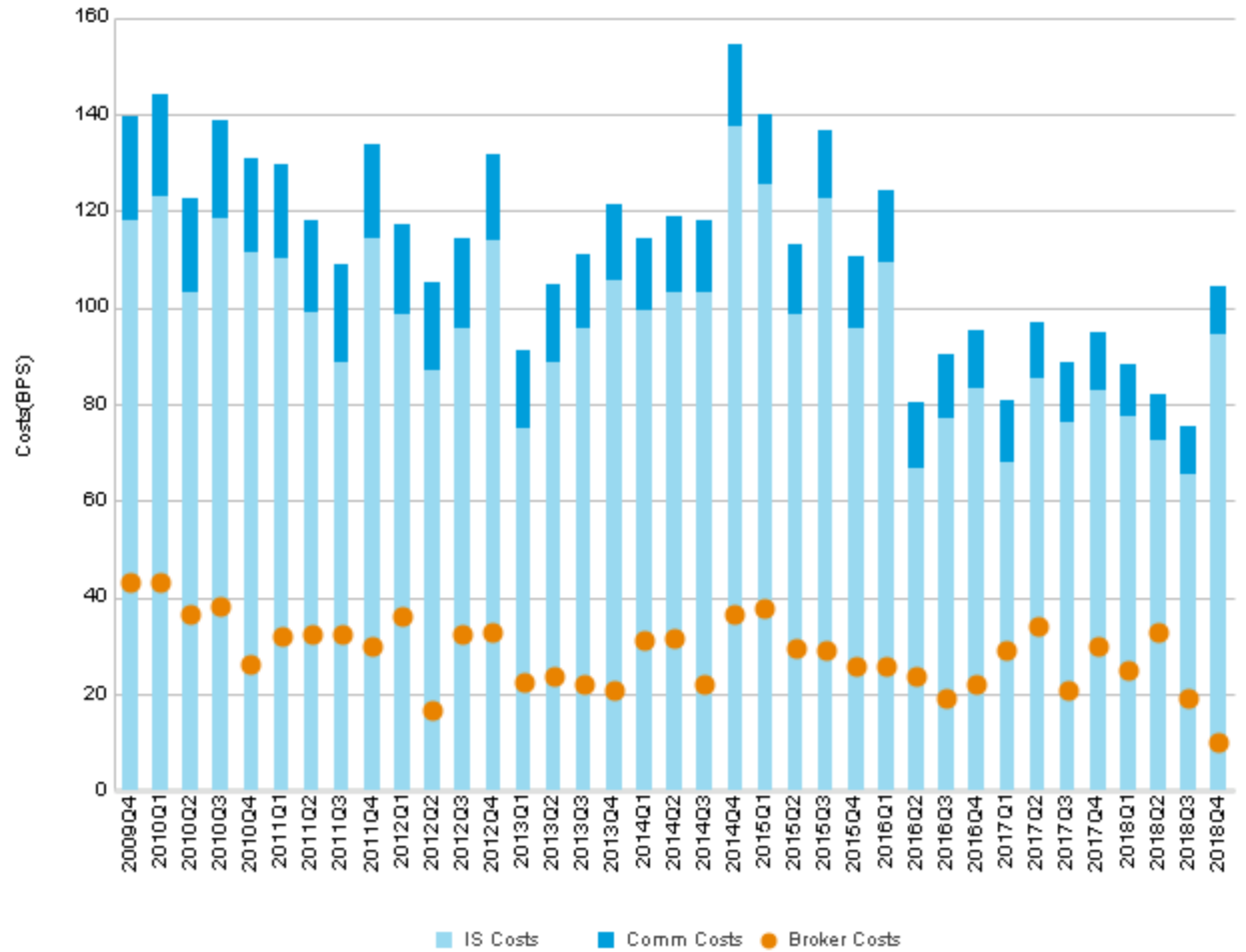
# United States - Micro Cap (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	181.5	30.4	211.9	55.1
2010Q1	153.1	32.1	185.2	24.1
2010Q2	164.5	30.5	195.0	44.4
2010Q3	158.5	26.8	185.2	38.0
2010Q4	128.1	23.6	151.7	41.7
2011Q1	131.9	26.3	158.2	22.6
2011Q2	186.1	25.6	211.7	80.8
2011Q3	166.9	23.8	190.7	37.0
2011Q4	128.1	25.5	153.7	52.7
2012Q1	146.7	25.7	172.4	58.7
2012Q2	132.0	23.7	155.7	32.6
2012Q3	149.6	23.1	172.7	30.0
2012Q4	112.0	20.9	132.9	34.6
2013Q1	86.8	21.9	108.7	17.4
2013Q2	119.0	19.9	138.9	21.4
2013Q3	73.9	18.4	92.3	9.0
2013Q4	88.8	19.7	108.5	12.2
2014Q1	85.3	18.0	103.3	20.2
2014Q2	112.0	17.2	129.2	22.7
2014Q3	169.9	19.8	189.7	53.0
2014Q4	106.0	17.7	123.8	26.3
2015Q1	98.1	16.2	114.3	27.2
2015Q2	120.7	20.3	141.0	45.6
2015Q3	133.2	17.6	150.8	28.8
2015Q4	122.7	18.4	141.1	28.7
2016Q1	179.3	19.3	198.6	49.6
2016Q2	101.3	16.1	117.4	30.3
2016Q3	57.9	17.8	75.7	19.4
2016Q4	68.9	13.0	81.9	30.5
2017Q1	100.4	15.2	115.6	50.8
2017Q2	152.1	16.0	168.0	67.0
2017Q3	106.7	17.2	123.8	14.7
2017Q4	102.3	16.2	118.4	10.3
2018Q1	74.0	15.2	89.2	16.6
2018Q2	65.4	12.7	78.1	16.3
2018Q3	54.3	10.5	64.8	0.7
2018Q4	73.1	14.1	87.3	23.4



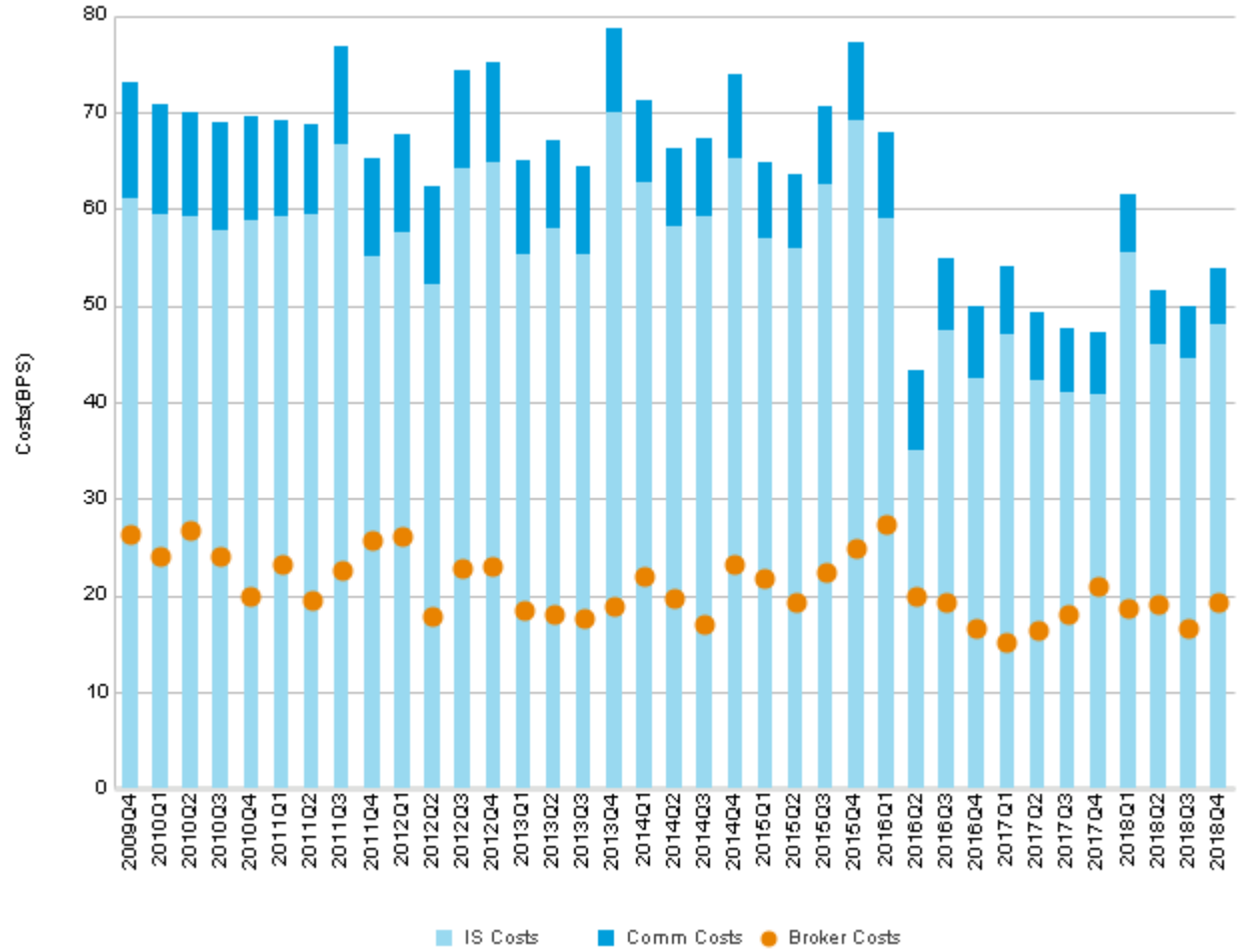
# United States - Small Cap (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	118.1	21.4	139.5	43.1
2010Q1	123.2	20.8	144.0	43.2
2010Q2	103.2	19.4	122.6	36.4
2010Q3	118.5	20.4	138.9	38.3
2010Q4	111.4	19.3	130.6	26.1
2011Q1	110.1	19.5	129.6	32.0
2011Q2	99.0	19.2	118.2	32.5
2011Q3	88.7	20.3	109.0	32.2
2011Q4	114.2	19.5	133.7	30.0
2012Q1	98.5	18.7	117.3	36.2
2012Q2	86.9	18.4	105.3	16.5
2012Q3	95.5	18.8	114.2	32.4
2012Q4	113.7	18.2	131.8	33.0
2013Q1	74.8	16.2	91.0	22.3
2013Q2	88.6	16.4	105.0	23.6
2013Q3	95.5	15.6	111.1	22.2
2013Q4	105.5	16.0	121.5	20.9
2014Q1	99.5	15.0	114.5	31.2
2014Q2	103.1	15.7	118.8	31.4
2014Q3	103.1	15.0	118.1	22.0
2014Q4	137.3	17.0	154.3	36.5
2015Q1	125.3	14.8	140.1	37.8
2015Q2	98.8	14.3	113.1	29.4
2015Q3	122.5	14.1	136.6	28.9
2015Q4	95.8	14.6	110.4	25.8
2016Q1	109.3	14.8	124.2	25.6
2016Q2	66.9	13.5	80.4	23.8
2016Q3	77.1	13.4	90.5	19.1
2016Q4	83.3	12.1	95.4	22.2
2017Q1	67.8	13.0	80.8	29.0
2017Q2	85.2	11.9	97.0	34.2
2017Q3	76.3	12.4	88.7	20.7
2017Q4	82.8	12.0	94.8	29.8
2018Q1	77.3	11.1	88.4	24.9
2018Q2	72.4	9.6	82.0	32.9
2018Q3	65.4	10.2	75.6	19.1
2018Q4	94.5	10.0	104.5	10.0



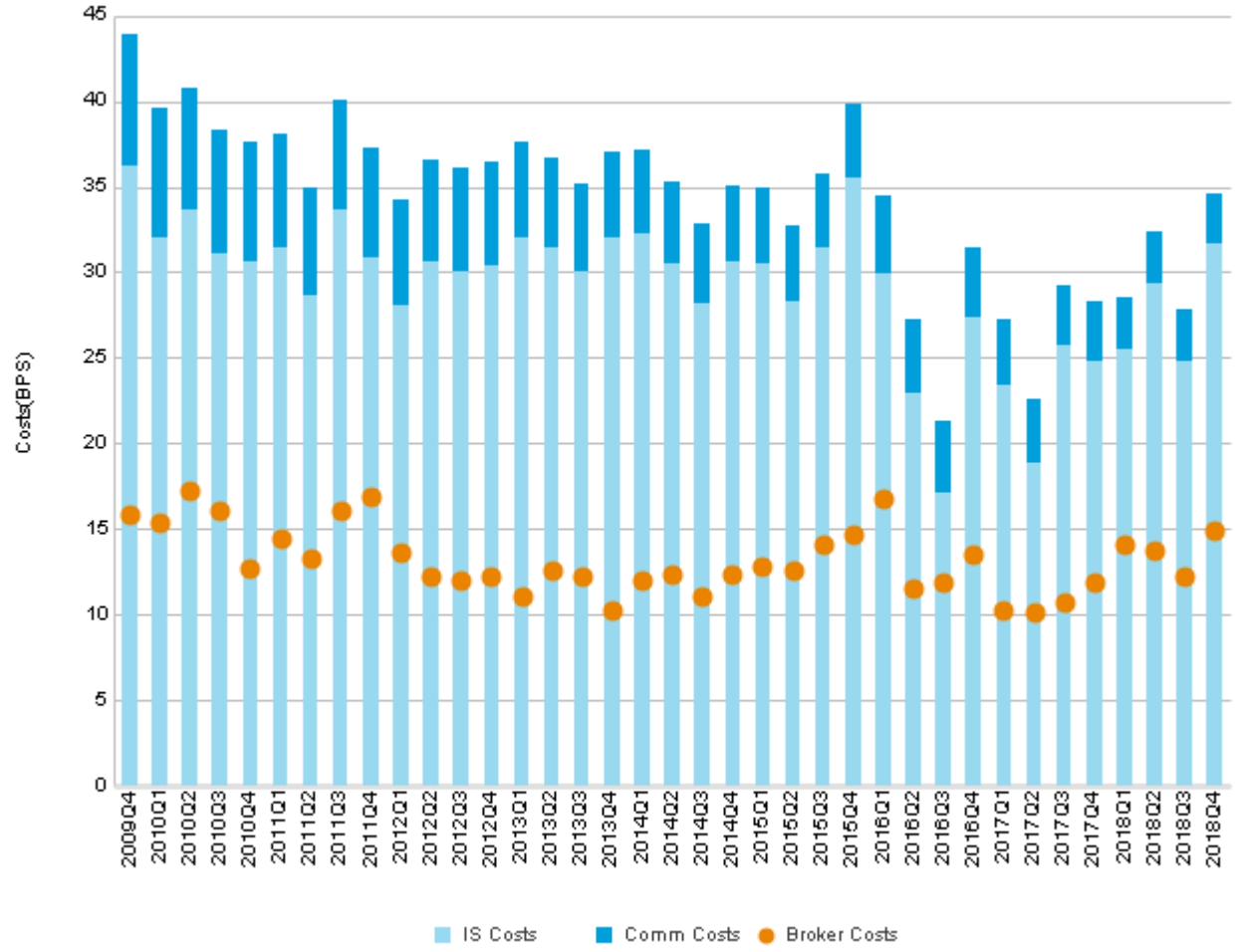
# United States - Mid Cap (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	61.1	11.9	73.0	26.3
2010Q1	59.4	11.4	70.8	24.0
2010Q2	59.2	10.8	70.0	26.8
2010Q3	57.8	11.1	68.8	24.0
2010Q4	58.9	10.6	69.4	20.0
2011Q1	59.2	10.0	69.2	23.2
2011Q2	59.4	9.4	68.8	19.5
2011Q3	66.6	10.2	76.8	22.6
2011Q4	55.0	10.2	65.3	25.8
2012Q1	57.5	10.2	67.7	26.1
2012Q2	52.1	10.2	62.3	17.8
2012Q3	64.2	10.2	74.4	22.8
2012Q4	64.9	10.3	75.2	23.0
2013Q1	55.3	9.7	65.1	18.5
2013Q2	57.9	9.2	67.1	18.1
2013Q3	55.3	9.0	64.3	17.6
2013Q4	70.0	8.7	78.6	18.8
2014Q1	62.8	8.5	71.3	21.9
2014Q2	58.1	8.2	66.3	19.7
2014Q3	59.2	8.1	67.3	17.0
2014Q4	65.3	8.6	73.9	23.3
2015Q1	57.0	7.8	64.7	21.9
2015Q2	56.0	7.6	63.6	19.4
2015Q3	62.6	8.0	70.6	22.4
2015Q4	69.1	8.2	77.3	24.9
2016Q1	59.0	8.9	67.9	27.3
2016Q2	35.0	8.3	43.3	19.9
2016Q3	47.4	7.6	55.0	19.3
2016Q4	42.5	7.4	49.9	16.6
2017Q1	47.1	7.0	54.1	15.2
2017Q2	42.2	7.1	49.3	16.5
2017Q3	41.0	6.7	47.7	18.0
2017Q4	40.7	6.5	47.2	20.9
2018Q1	55.5	5.9	61.4	18.8
2018Q2	46.1	5.5	51.6	19.1
2018Q3	44.6	5.3	49.9	16.6
2018Q4	48.1	5.7	53.8	19.4



# United States - Large Cap (BPS)

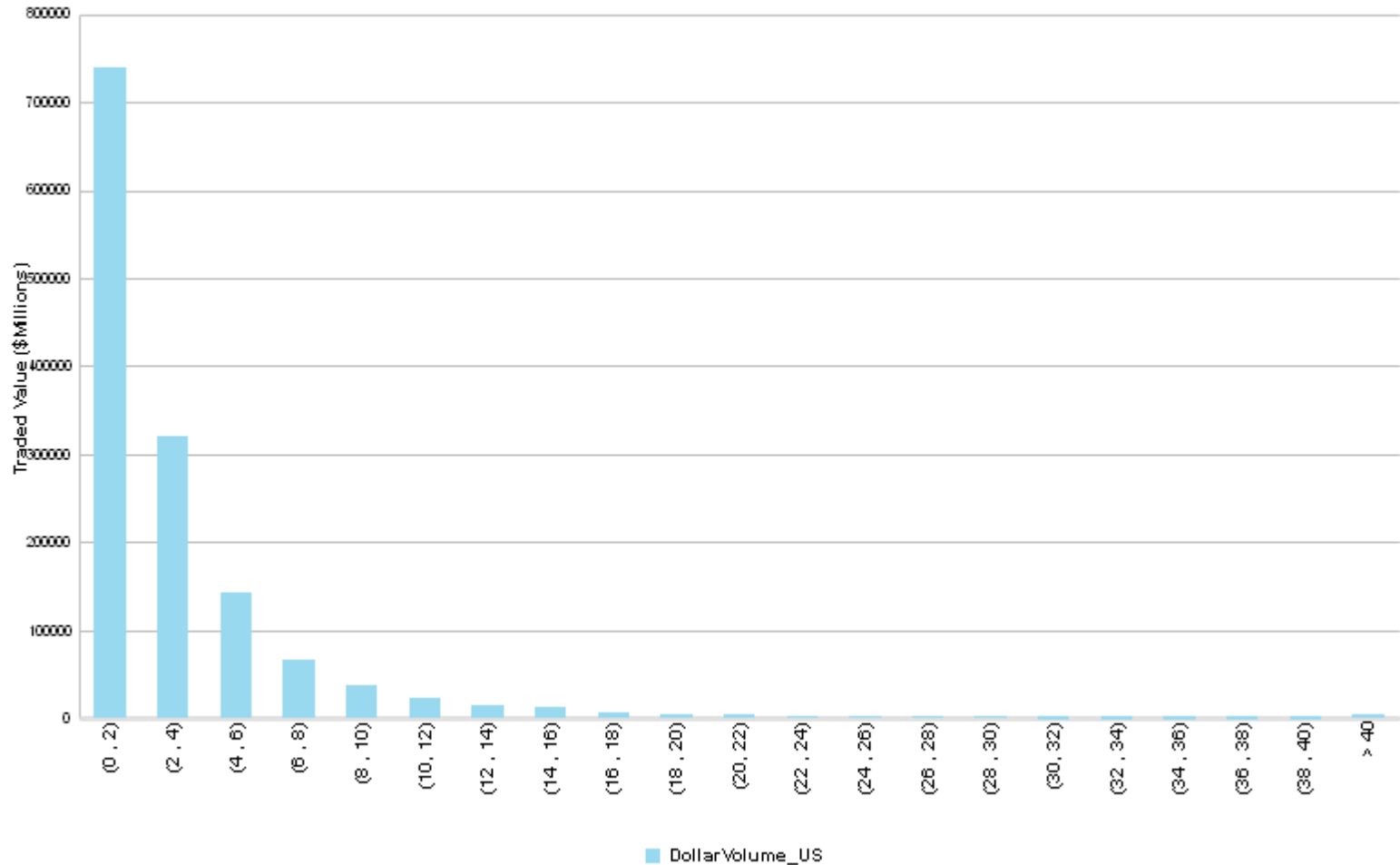
Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	36.2	7.7	43.9	15.9
2010Q1	32.0	7.6	39.6	15.4
2010Q2	33.7	7.1	40.8	17.3
2010Q3	31.1	7.2	38.4	16.1
2010Q4	30.6	7.0	37.7	12.7
2011Q1	31.5	6.6	38.1	14.5
2011Q2	28.7	6.3	35.0	13.3
2011Q3	33.7	6.4	40.1	16.1
2011Q4	30.9	6.4	37.3	16.9
2012Q1	28.1	6.2	34.3	13.6
2012Q2	30.6	6.0	36.6	12.2
2012Q3	30.1	6.0	36.1	12.0
2012Q4	30.4	6.1	36.5	12.3
2013Q1	32.0	5.6	37.6	11.1
2013Q2	31.4	5.3	36.8	12.6
2013Q3	30.0	5.2	35.2	12.2
2013Q4	32.0	5.0	37.0	10.3
2014Q1	32.3	4.9	37.2	12.0
2014Q2	30.5	4.8	35.3	12.4
2014Q3	28.2	4.7	32.9	11.1
2014Q4	30.6	4.5	35.1	12.3
2015Q1	30.5	4.4	34.9	12.9
2015Q2	28.3	4.4	32.8	12.6
2015Q3	31.4	4.4	35.7	14.1
2015Q4	35.5	4.3	39.8	14.7
2016Q1	30.0	4.5	34.5	16.8
2016Q2	22.9	4.4	27.3	11.6
2016Q3	17.2	4.1	21.3	11.9
2016Q4	27.3	4.1	31.4	13.6
2017Q1	23.4	3.9	27.3	10.3
2017Q2	18.9	3.7	22.6	10.2
2017Q3	25.8	3.5	29.3	10.8
2017Q4	24.9	3.5	28.3	11.9
2018Q1	25.5	3.1	28.6	14.1
2018Q2	29.4	3.1	32.4	13.8
2018Q3	24.8	3.0	27.8	12.3
2018Q4	31.7	3.0	34.6	15.0





# United States Commission (BPS)

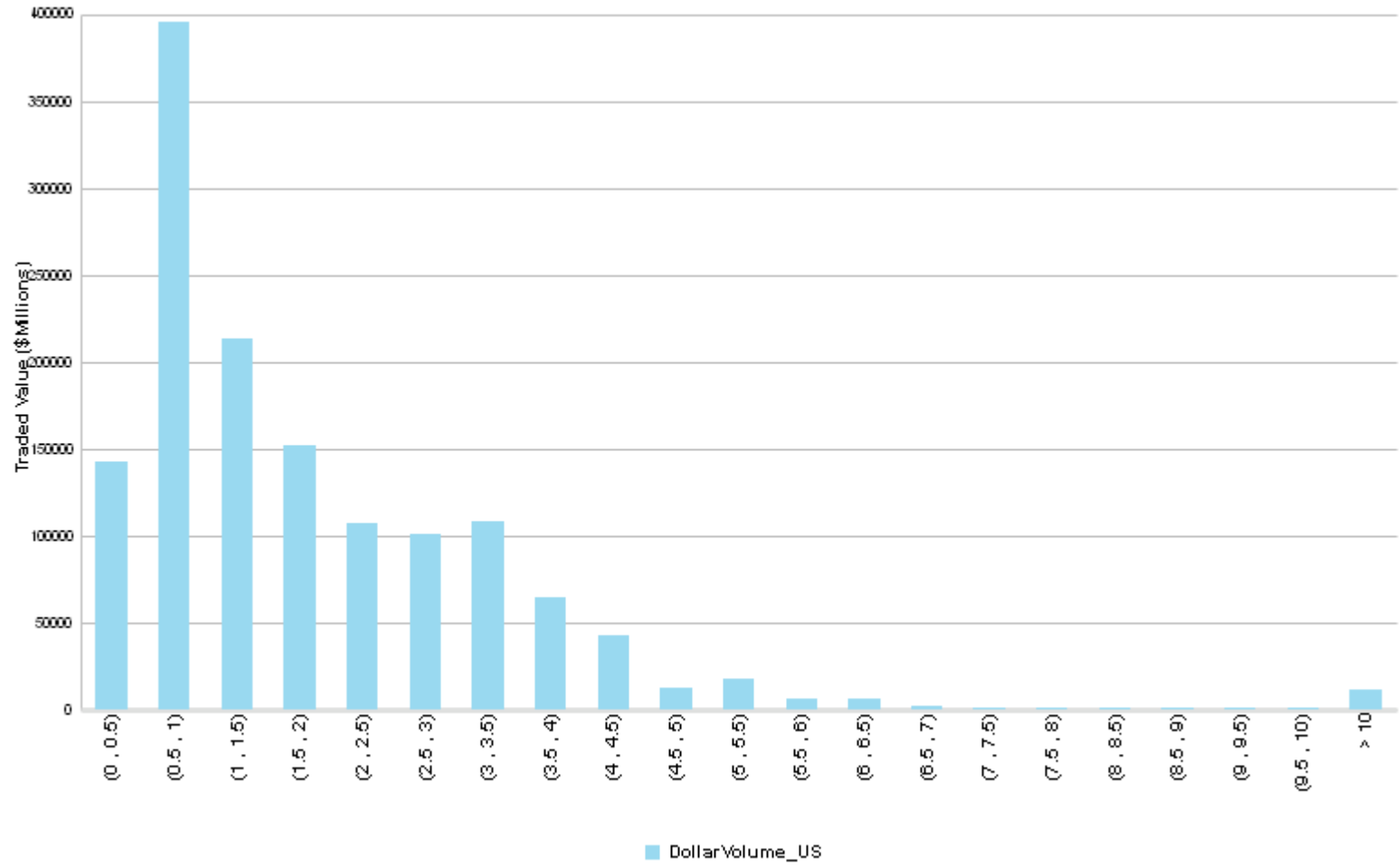
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	739,788
(2 , 4)	320,934
(4 , 6)	143,494
(6 , 8)	66,673
(8 , 10)	38,317
(10 , 12)	22,285
(12 , 14)	13,948
(14 , 16)	12,327
(16 , 18)	7,528
(18 , 20)	4,851
(20 , 22)	3,806
(22 , 24)	3,193
(24 , 26)	2,471
(26 , 28)	2,008
(28 , 30)	1,578
(30 , 32)	1,269
(32 , 34)	1,234
(34 , 36)	948
(36 , 38)	761
(38 , 40)	776
> 40	4,686
<b>Total</b>	<b>1,392,874</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	14.1	1,787
Small Cap	10.0	11,115
Mid Cap	5.7	221,569
Large Cap	3.0	1,158,403
<b>Total</b>	<b>3.5</b>	<b>1,392,874</b>

# United States Commission (CPS)

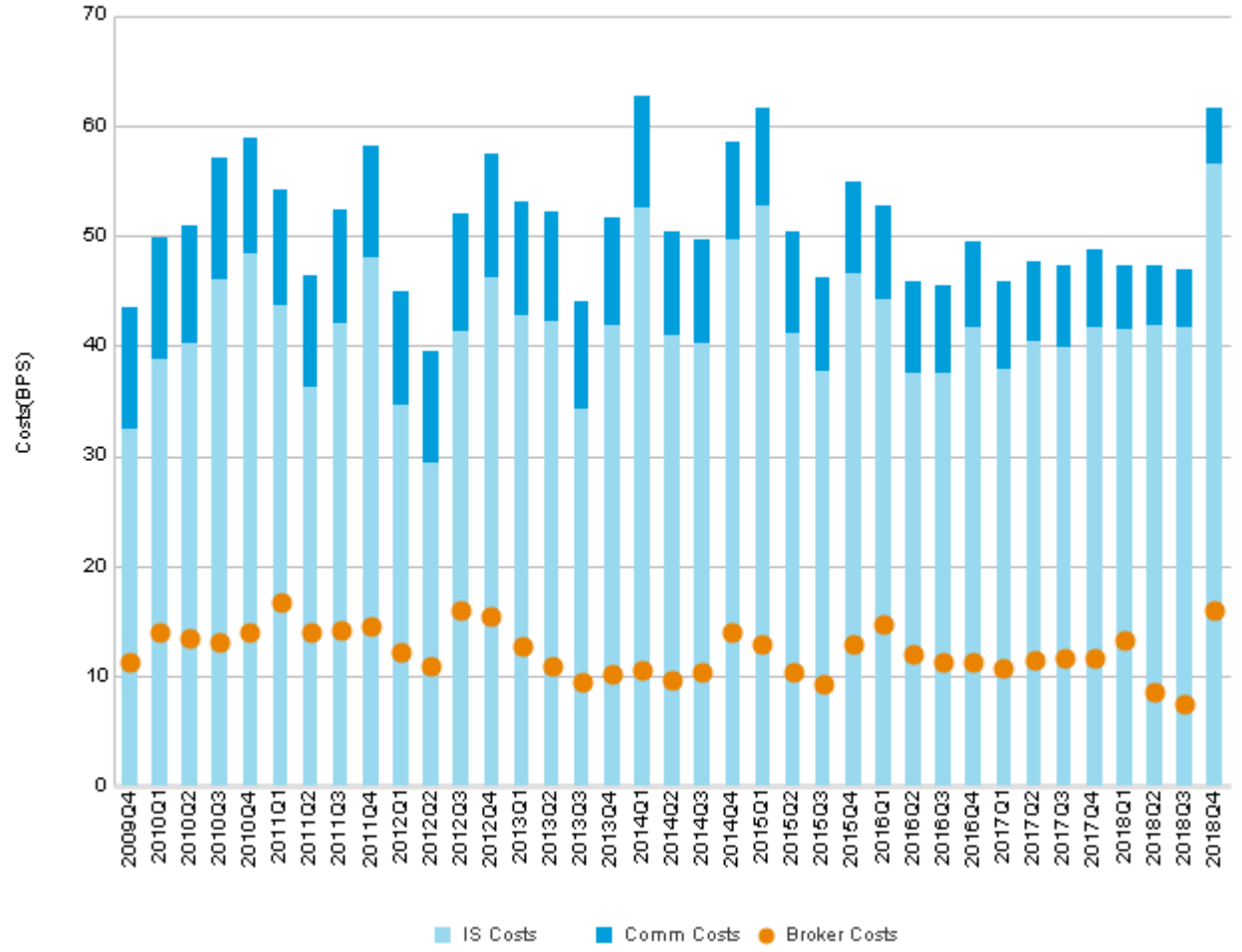
Commission (CPS)	Traded Value (USD Millions)
(0 , 0.5)	142,584
(0.5 , 1)	395,281
(1 , 1.5)	213,942
(1.5 , 2)	152,188
(2 , 2.5)	107,379
(2.5 , 3)	100,682
(3 , 3.5)	108,449
(3.5 , 4)	64,786
(4 , 4.5)	43,326
(4.5 , 5)	12,451
(5 , 5.5)	18,064
(5.5 , 6)	6,914
(6 , 6.5)	6,163
(6.5 , 7)	1,992
(7 , 7.5)	1,370
(7.5 , 8)	1,360
(8 , 8.5)	1,546
(8.5 , 9)	899
(9 , 9.5)	957
(9.5 , 10)	956
> 10	11,584
<b>Total</b>	<b>1,392,874</b>



Market Cap	Avg Commission (CPS)	Traded Value (USD Millions)
Micro Cap	0.8	1,787
Small Cap	1.1	11,115
Mid Cap	1.4	221,569
Large Cap	1.7	1,158,403
<b>Total</b>	<b>1.6</b>	<b>1,392,874</b>

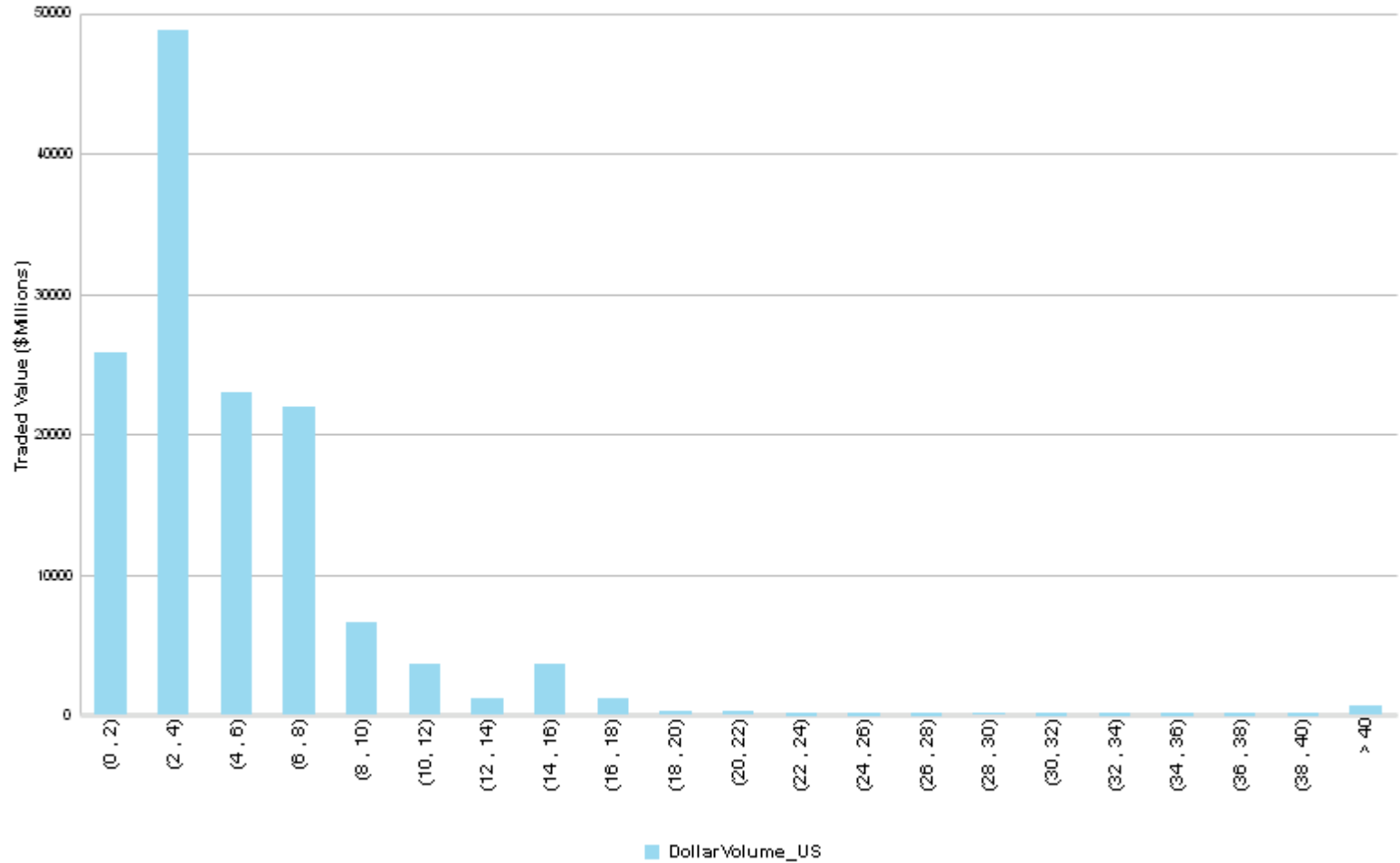
# United Kingdom (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker_BPS
2009Q4	32.5	11.0	43.5	11.2
2010Q1	38.7	11.1	49.8	13.9
2010Q2	40.3	10.7	51.0	13.4
2010Q3	46.1	11.0	57.1	13.1
2010Q4	48.4	10.5	59.0	13.9
2011Q1	43.6	10.6	54.2	16.7
2011Q2	36.2	10.2	46.4	13.9
2011Q3	42.1	10.2	52.3	14.1
2011Q4	48.0	10.1	58.1	14.6
2012Q1	34.7	10.3	45.0	12.1
2012Q2	29.4	10.1	39.5	10.9
2012Q3	41.4	10.6	52.0	15.9
2012Q4	46.3	11.1	57.4	15.5
2013Q1	42.8	10.3	53.1	12.7
2013Q2	42.3	9.8	52.1	11.0
2013Q3	34.3	9.8	44.1	9.5
2013Q4	41.8	9.9	51.8	10.2
2014Q1	52.5	10.1	62.6	10.6
2014Q2	40.9	9.5	50.4	9.7
2014Q3	40.3	9.4	49.8	10.4
2014Q4	49.6	8.9	58.5	14.0
2015Q1	52.7	8.9	61.6	12.8
2015Q2	41.2	9.2	50.4	10.4
2015Q3	37.7	8.6	46.3	9.3
2015Q4	46.5	8.3	54.9	13.0
2016Q1	44.1	8.6	52.7	14.8
2016Q2	37.5	8.3	45.9	11.9
2016Q3	37.5	8.0	45.5	11.3
2016Q4	41.7	7.8	49.5	11.2
2017Q1	37.8	8.1	45.9	10.7
2017Q2	40.4	7.2	47.6	11.4
2017Q3	39.9	7.4	47.3	11.7
2017Q4	41.7	7.0	48.8	11.6
2018Q1	41.6	5.8	47.3	13.3
2018Q2	41.8	5.5	47.3	8.5
2018Q3	41.6	5.3	46.9	7.4
2018Q4	56.6	5.1	61.7	16.1



# United Kingdom Commission (BPS)

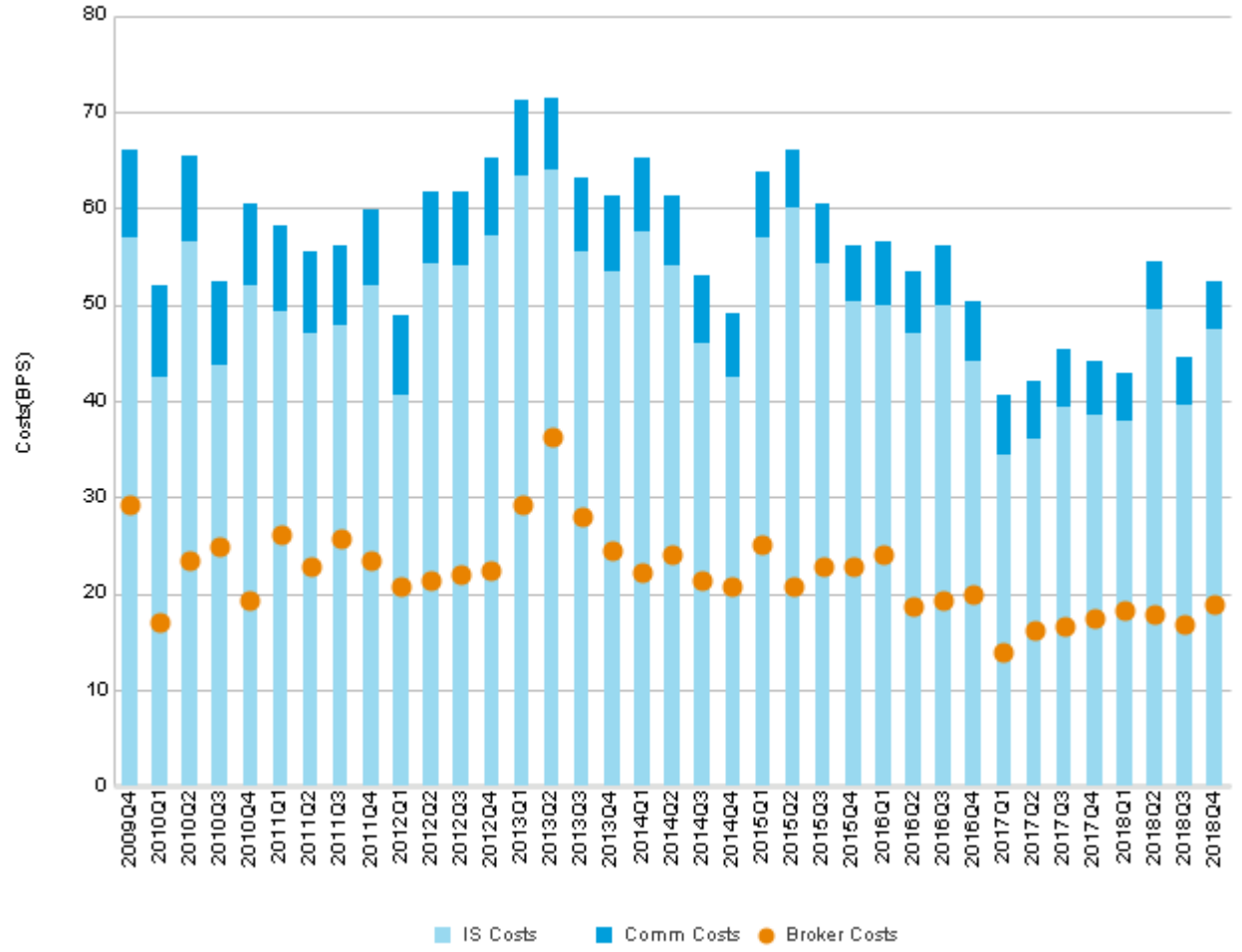
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	25,873
(2 , 4)	48,770
(4 , 6)	22,980
(6 , 8)	21,972
(8 , 10)	6,651
(10 , 12)	3,611
(12 , 14)	1,229
(14 , 16)	3,676
(16 , 18)	1,228
(18 , 20)	215
(20 , 22)	243
(22 , 24)	28
(24 , 26)	26
(26 , 28)	42
(28 , 30)	111
(30 , 32)	3
(32 , 34)	79
(34 , 36)	28
(36 , 38)	44
(38 , 40)	12
> 40	630
<b>Total</b>	<b>137,452</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	7.3	190
Small Cap	7.3	1,147
Mid Cap	5.5	23,662
Large Cap	4.9	112,452
<b>Total</b>	<b>5.1</b>	<b>137,452</b>

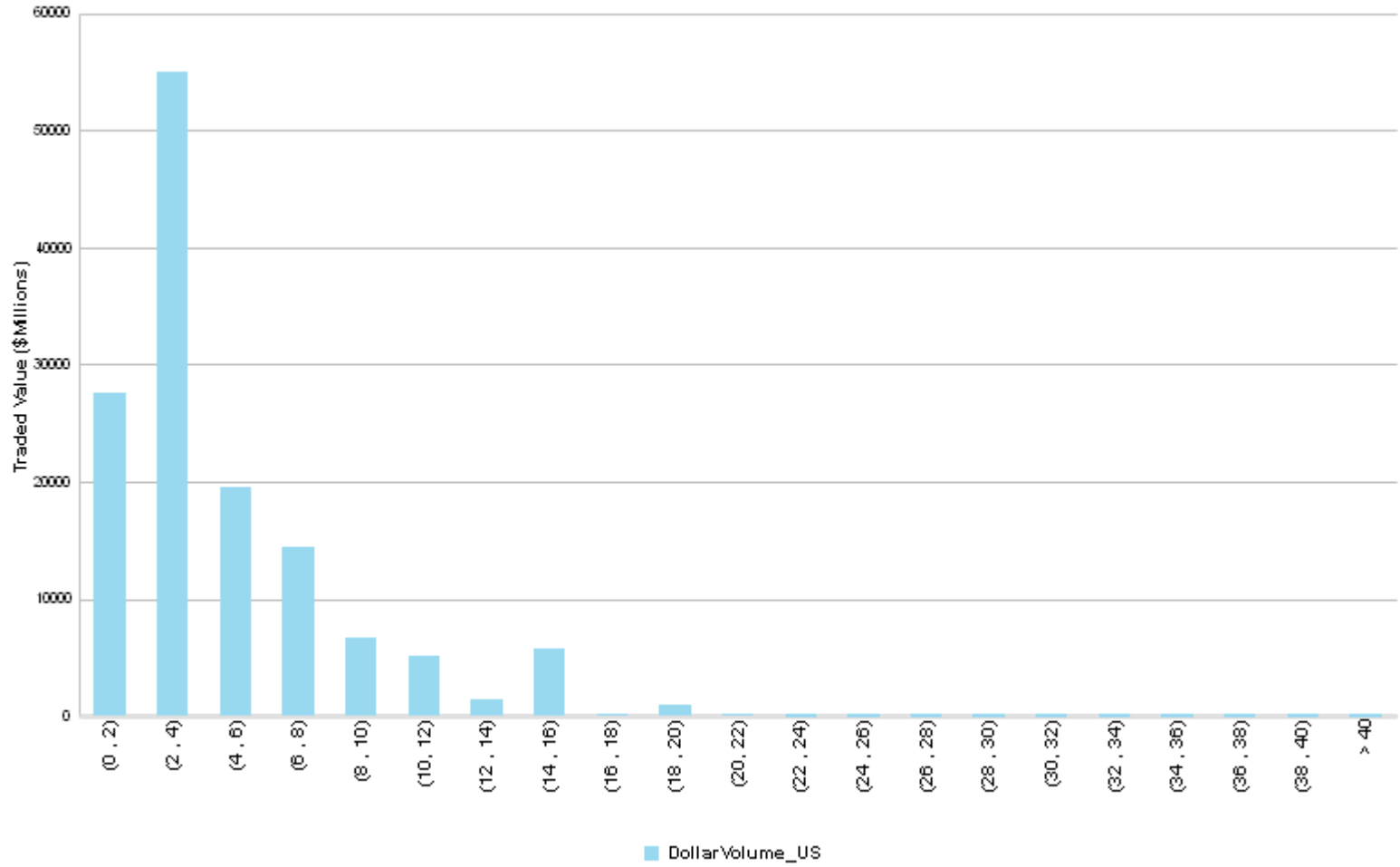
# Japan (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	56.9	9.1	66.0	29.3
2010Q1	42.5	9.4	51.9	17.1
2010Q2	56.6	8.9	65.5	23.4
2010Q3	43.7	8.7	52.4	24.9
2010Q4	52.0	8.5	60.5	19.3
2011Q1	49.2	9.0	58.2	26.1
2011Q2	47.1	8.4	55.5	22.9
2011Q3	47.9	8.2	56.1	25.8
2011Q4	51.9	8.0	60.0	23.5
2012Q1	40.6	8.3	49.0	20.8
2012Q2	54.3	7.5	61.8	21.3
2012Q3	54.1	7.6	61.7	21.9
2012Q4	57.1	8.1	65.2	22.3
2013Q1	63.4	7.9	71.4	29.2
2013Q2	63.9	7.6	71.5	36.3
2013Q3	55.4	7.7	63.1	28.0
2013Q4	53.5	7.7	61.2	24.5
2014Q1	57.5	7.8	65.3	22.2
2014Q2	54.1	7.3	61.4	24.0
2014Q3	46.0	7.0	53.0	21.4
2014Q4	42.4	6.7	49.0	20.8
2015Q1	57.0	6.7	63.7	25.1
2015Q2	60.0	6.1	66.1	20.7
2015Q3	54.3	6.1	60.4	22.8
2015Q4	50.3	5.8	56.1	22.8
2016Q1	49.8	6.7	56.6	24.1
2016Q2	47.0	6.4	53.3	18.8
2016Q3	49.8	6.3	56.2	19.3
2016Q4	44.1	6.2	50.3	19.9
2017Q1	34.4	6.3	40.7	13.9
2017Q2	36.0	6.1	42.1	16.1
2017Q3	39.5	5.9	45.3	16.6
2017Q4	38.5	5.6	44.1	17.5
2018Q1	37.9	4.9	42.8	18.2
2018Q2	49.5	5.0	54.5	17.8
2018Q3	39.5	5.0	44.5	16.7
2018Q4	47.5	4.9	52.4	18.8



# Japan Commission (BPS)

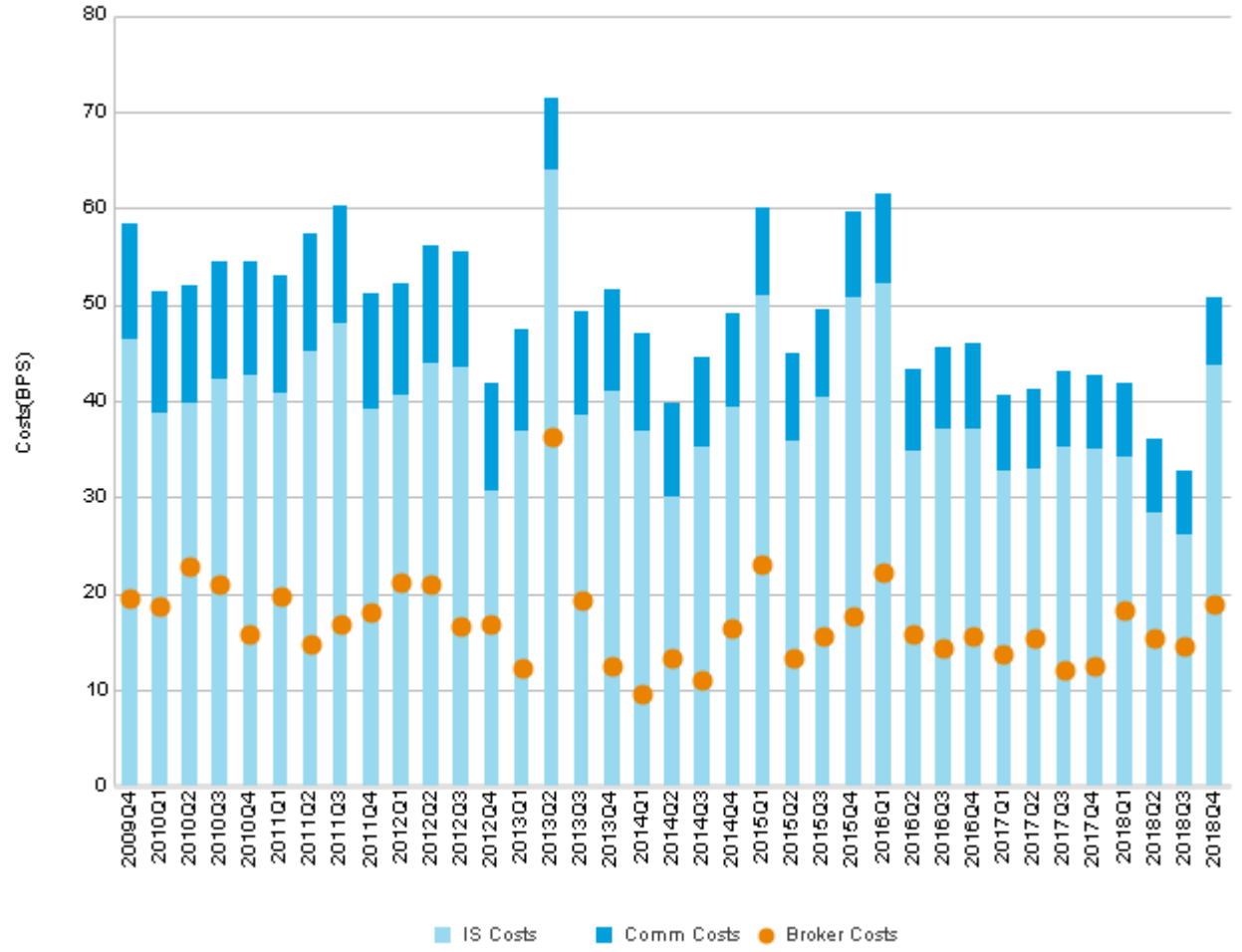
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	27,530
(2 , 4)	54,930
(4 , 6)	19,601
(6 , 8)	14,462
(8 , 10)	6,616
(10 , 12)	5,113
(12 , 14)	1,420
(14 , 16)	5,752
(16 , 18)	213
(18 , 20)	1,015
(20 , 22)	109
(22 , 24)	10
(24 , 26)	41
(26 , 28)	16
(28 , 30)	6
(30 , 32)	17
(32 , 34)	51
(34 , 36)	52
(36 , 38)	16
(38 , 40)	21
> 40	54
<b>Total</b>	<b>137,045</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	4.9	125
Small Cap	4.5	1,644
Mid Cap	4.7	28,787
Large Cap	5.0	106,489
<b>Total</b>	<b>4.9</b>	<b>137,045</b>

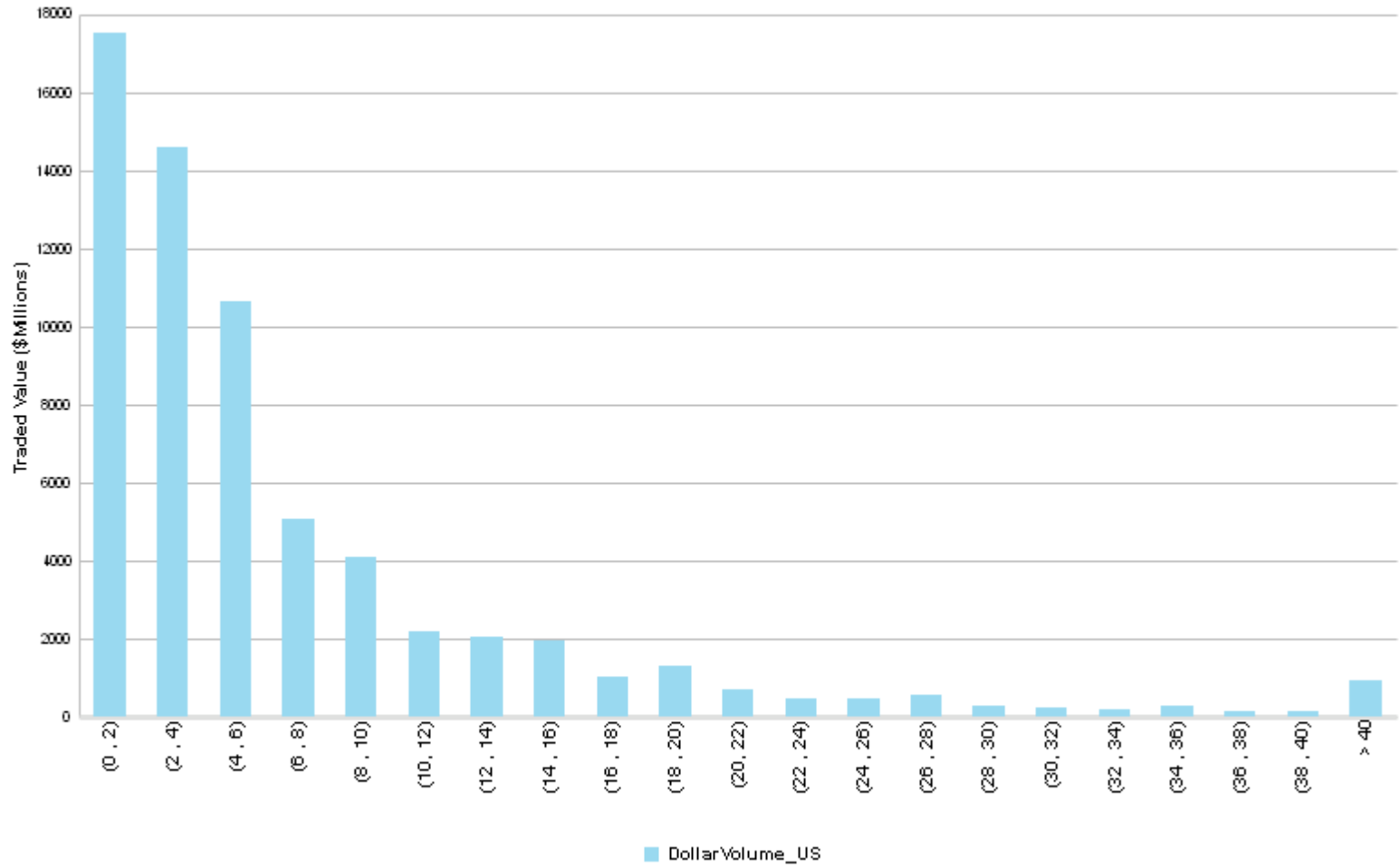
# Canada (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	46.3	12.2	58.5	19.6
2010Q1	38.8	12.6	51.4	18.7
2010Q2	39.8	12.2	52.0	22.9
2010Q3	42.3	12.2	54.5	21.0
2010Q4	42.6	11.9	54.5	15.8
2011Q1	40.9	12.1	53.0	19.8
2011Q2	45.1	12.3	57.4	14.7
2011Q3	48.0	12.3	60.3	16.9
2011Q4	39.1	12.1	51.2	18.1
2012Q1	40.5	11.7	52.3	21.1
2012Q2	43.9	12.3	56.2	20.9
2012Q3	43.5	12.0	55.5	16.7
2012Q4	30.6	11.3	41.9	16.8
2013Q1	36.8	10.6	47.4	12.3
2013Q2	63.9	7.6	71.5	36.3
2013Q3	38.6	10.7	49.3	19.2
2013Q4	41.1	10.5	51.7	12.5
2014Q1	36.8	10.3	47.0	9.5
2014Q2	30.0	9.8	39.9	13.4
2014Q3	35.2	9.4	44.6	11.0
2014Q4	39.3	9.8	49.0	16.5
2015Q1	51.0	9.0	60.1	23.0
2015Q2	35.9	9.1	45.0	13.3
2015Q3	40.4	9.1	49.4	15.5
2015Q4	50.7	9.0	59.7	17.7
2016Q1	52.1	9.3	61.5	22.1
2016Q2	34.8	8.5	43.4	15.8
2016Q3	37.1	8.5	45.6	14.3
2016Q4	37.2	8.8	46.0	15.6
2017Q1	32.7	7.9	40.7	13.7
2017Q2	33.0	8.2	41.2	15.4
2017Q3	35.3	7.8	43.1	12.1
2017Q4	35.0	7.7	42.7	12.4
2018Q1	34.2	7.7	41.9	18.2
2018Q2	28.5	7.6	36.0	15.3
2018Q3	26.0	6.7	32.7	14.6
2018Q4	43.7	7.1	50.8	18.9



# Canada Commission (BPS)

Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	17,537
(2 , 4)	14,610
(4 , 6)	10,667
(6 , 8)	5,068
(8 , 10)	4,074
(10 , 12)	2,206
(12 , 14)	2,061
(14 , 16)	1,945
(16 , 18)	1,022
(18 , 20)	1,309
(20 , 22)	689
(22 , 24)	474
(24 , 26)	455
(26 , 28)	554
(28 , 30)	305
(30 , 32)	228
(32 , 34)	209
(34 , 36)	300
(36 , 38)	164
(38 , 40)	163
> 40	950
<b>Total</b>	<b>64,988</b>

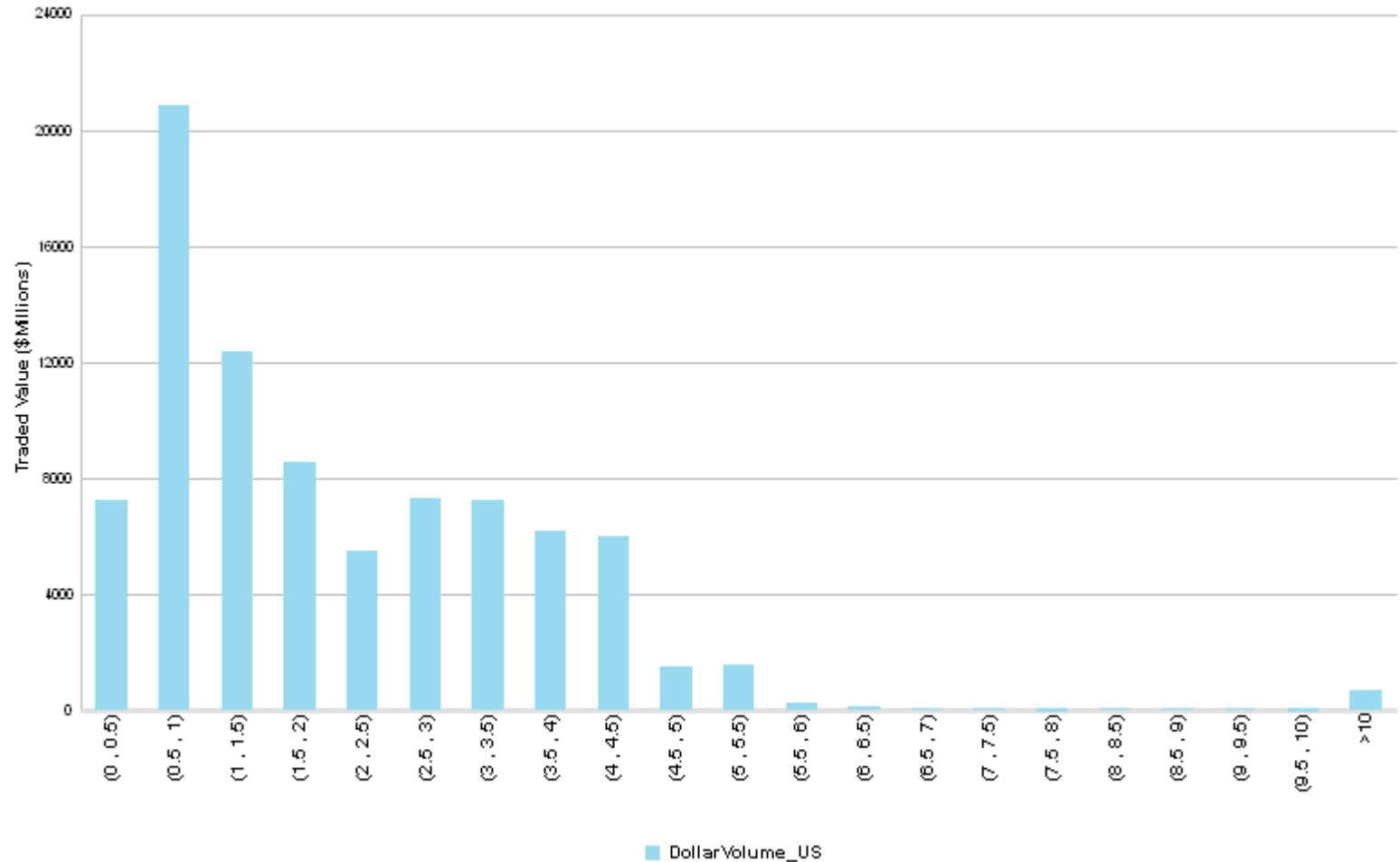


Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	15.2	562
Small Cap	15.8	2,022
Mid Cap	11.1	17,068
Large Cap	5.1	45,337
<b>Total</b>	<b>7.1</b>	<b>64,988</b>



# Canada Commission (CAD CPS)

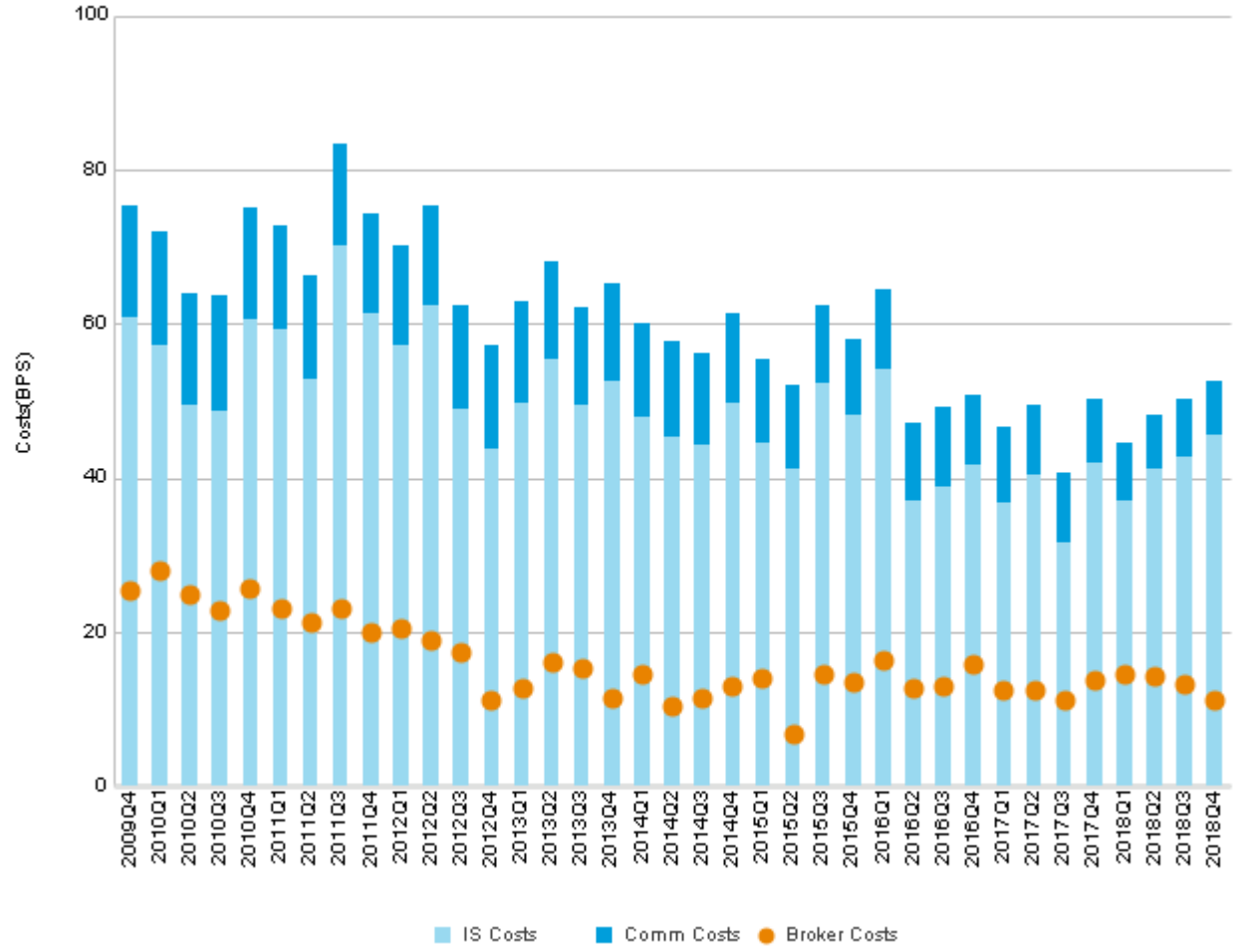
Commission (CAD CPS)	Traded Value (CAD Millions)
(0 , 0.5)	7,227
(0.5 , 1)	20,886
(1 , 1.5)	12,366
(1.5 , 2)	8,553
(2 , 2.5)	5,510
(2.5 , 3)	7,295
(3 , 3.5)	7,273
(3.5 , 4)	6,213
(4 , 4.5)	6,009
(4.5 , 5)	1,484
(5 , 5.5)	1,543
(5.5 , 6)	249
(6 , 6.5)	130
(6.5 , 7)	94
(7 , 7.5)	42
(7.5 , 8)	37
(8 , 8.5)	58
(8.5 , 9)	45
(9 , 9.5)	67
(9.5 , 10)	34
>10	676
<b>Total</b>	<b>85,791</b>



Market Cap	Avg Commission (CAD CPS)	Traded Value (CAD Millions)
Micro Cap	0.8	743
Small Cap	1.0	2,672
Mid Cap	1.5	22,528
Large Cap	2.0	59,848
<b>Total</b>	<b>1.6</b>	<b>85,791</b>

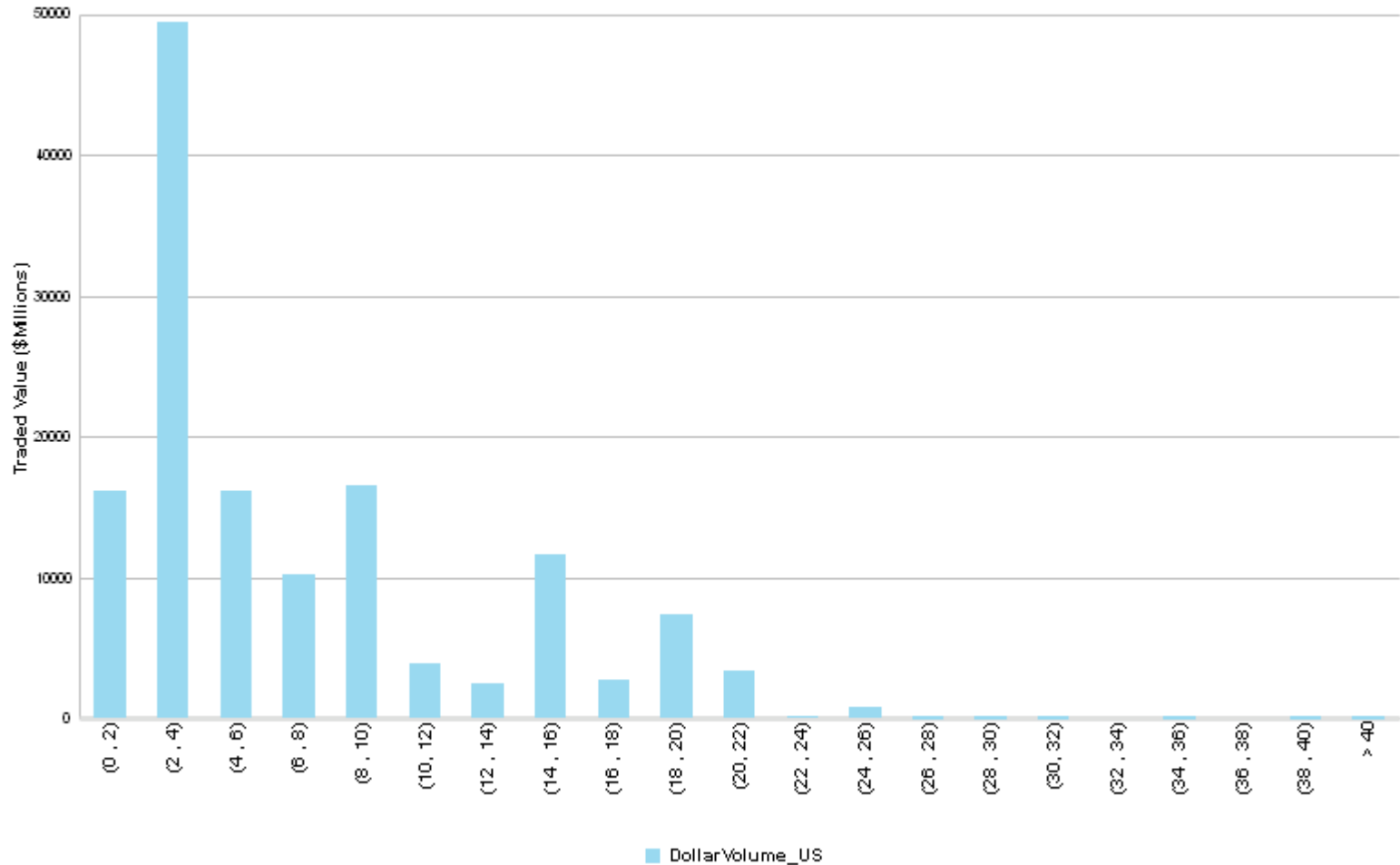
# Asia Pacific ex - Japan(BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	60.9	14.5	75.4	25.4
2010Q1	57.2	14.8	72.0	28.0
2010Q2	49.5	14.5	64.0	24.9
2010Q3	48.8	15.0	63.9	22.8
2010Q4	60.5	14.5	75.0	25.6
2011Q1	59.3	13.5	72.9	23.2
2011Q2	52.9	13.5	66.4	21.4
2011Q3	70.2	13.2	83.4	23.1
2011Q4	61.3	13.1	74.3	19.9
2012Q1	57.1	13.0	70.1	20.4
2012Q2	62.4	13.0	75.5	19.0
2012Q3	49.0	13.3	62.3	17.5
2012Q4	43.8	13.3	57.1	11.3
2013Q1	49.8	13.0	62.8	12.7
2013Q2	55.5	12.6	68.1	16.0
2013Q3	49.5	12.6	62.1	15.3
2013Q4	52.5	12.7	65.1	11.5
2014Q1	47.8	12.3	60.1	14.6
2014Q2	45.2	12.5	57.7	10.4
2014Q3	44.2	12.1	56.3	11.4
2014Q4	49.8	11.4	61.3	13.0
2015Q1	44.5	10.9	55.4	14.1
2015Q2	41.1	11.0	52.1	6.7
2015Q3	52.3	10.0	62.3	14.5
2015Q4	48.1	9.9	57.9	13.4
2016Q1	54.1	10.3	64.4	16.5
2016Q2	37.1	9.9	47.1	12.8
2016Q3	39.0	10.1	49.1	13.1
2016Q4	41.6	9.2	50.8	15.8
2017Q1	36.9	9.6	46.5	12.6
2017Q2	40.4	9.1	49.5	12.5
2017Q3	31.6	9.1	40.6	11.2
2017Q4	42.1	8.1	50.2	13.9
2018Q1	37.1	7.3	44.5	14.6
2018Q2	41.2	7.0	48.2	14.3
2018Q3	42.7	7.4	50.1	13.3
2018Q4	45.5	7.2	52.7	11.3



## Asia Pacific ex - Japan Commission (BPS)

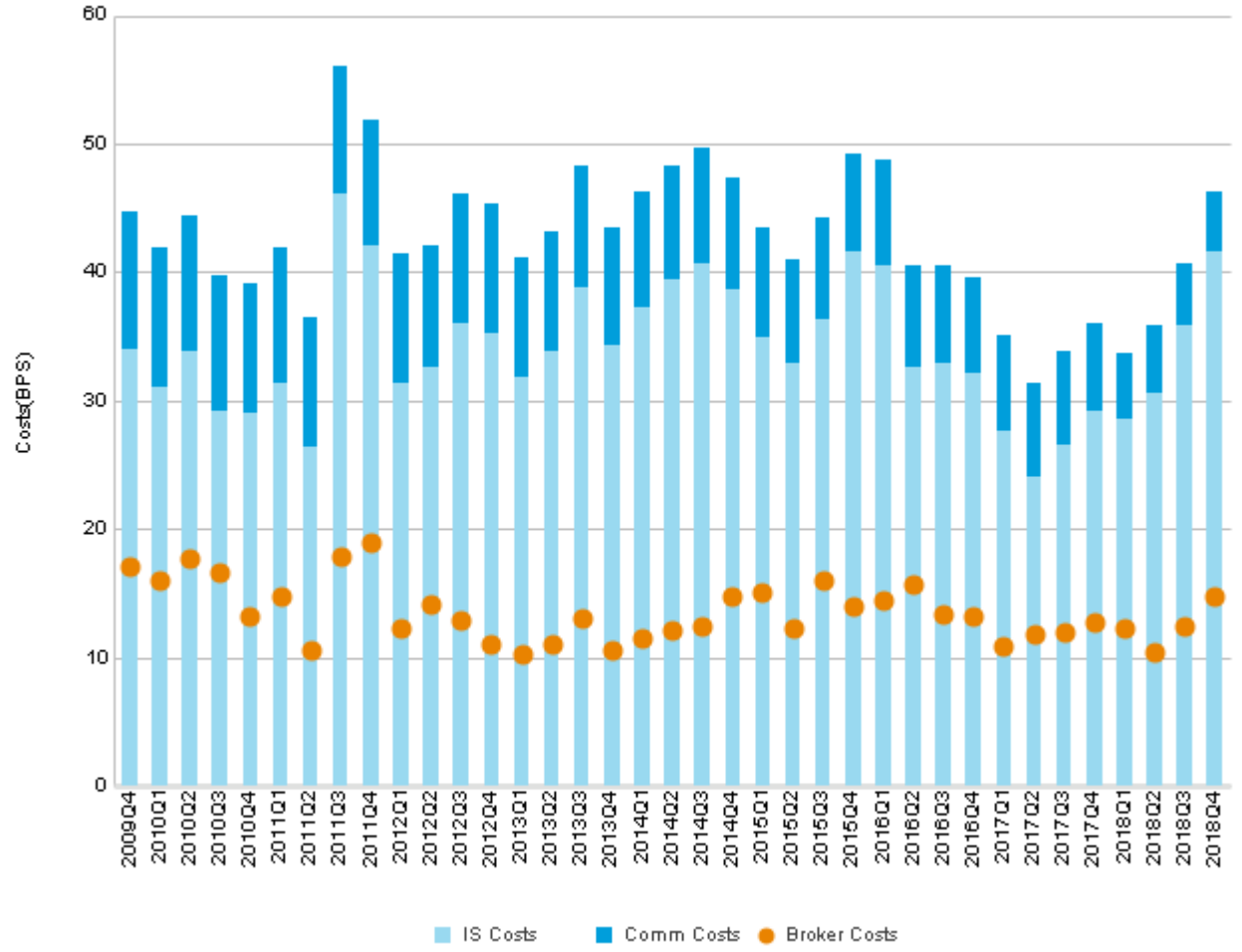
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	16,208
(2 , 4)	49,498
(4 , 6)	16,121
(6 , 8)	10,279
(8 , 10)	16,520
(10 , 12)	3,880
(12 , 14)	2,416
(14 , 16)	11,641
(16 , 18)	2,774
(18 , 20)	7,325
(20 , 22)	3,393
(22 , 24)	139
(24 , 26)	848
(26 , 28)	24
(28 , 30)	56
(30 , 32)	29
(32 , 34)	<1
(34 , 36)	10
(36 , 38)	1
(38 , 40)	10
> 40	69
<b>Total</b>	<b>141,243</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	10.2	121
Small Cap	7.8	947
Mid Cap	7.7	29,768
Large Cap	7.0	110,407
<b>Total</b>	<b>7.2</b>	<b>141,243</b>

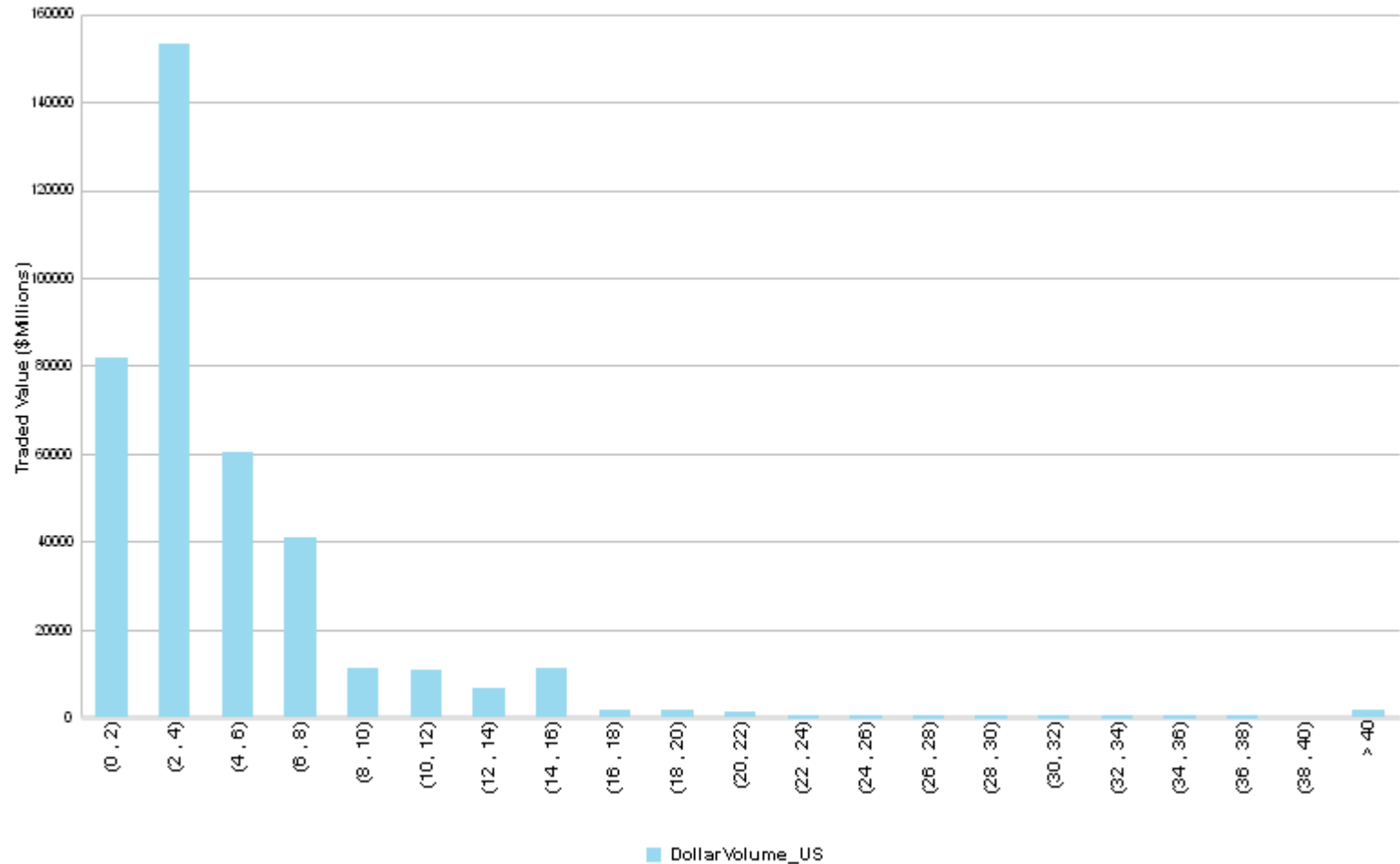
# Europe ex - UK (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker_BPS
2009Q4	34.0	10.8	44.8	17.1
2010Q1	31.0	10.9	41.9	16.0
2010Q2	33.9	10.5	44.4	17.8
2010Q3	29.2	10.6	39.8	16.6
2010Q4	29.1	10.1	39.2	13.3
2011Q1	31.4	10.5	42.0	14.8
2011Q2	26.4	10.1	36.5	10.6
2011Q3	46.1	9.9	56.0	17.9
2011Q4	42.1	9.7	51.8	18.9
2012Q1	31.4	10.0	41.4	12.3
2012Q2	32.6	9.5	42.1	14.1
2012Q3	36.1	10.0	46.1	12.9
2012Q4	35.2	10.1	45.3	11.1
2013Q1	31.8	9.4	41.3	10.3
2013Q2	33.9	9.3	43.2	11.1
2013Q3	38.8	9.5	48.4	13.0
2013Q4	34.4	9.1	43.4	10.6
2014Q1	37.3	9.0	46.3	11.6
2014Q2	39.4	8.9	48.3	12.2
2014Q3	40.7	9.0	49.6	12.5
2014Q4	38.7	8.7	47.4	14.8
2015Q1	35.0	8.5	43.5	15.2
2015Q2	32.9	8.1	41.0	12.3
2015Q3	36.3	7.9	44.1	16.0
2015Q4	41.7	7.6	49.3	14.0
2016Q1	40.5	8.3	48.7	14.5
2016Q2	32.7	7.8	40.5	15.8
2016Q3	33.0	7.6	40.6	13.3
2016Q4	32.1	7.4	39.5	13.3
2017Q1	27.7	7.4	35.1	10.9
2017Q2	24.1	7.3	31.4	11.8
2017Q3	26.6	7.3	33.9	12.0
2017Q4	29.2	6.9	36.1	12.8
2018Q1	28.6	5.2	33.7	12.3
2018Q2	30.7	5.2	35.9	10.5
2018Q3	35.9	4.9	40.8	12.4
2018Q4	41.6	4.8	46.3	14.8



## Europe ex - UK Commission (BPS)

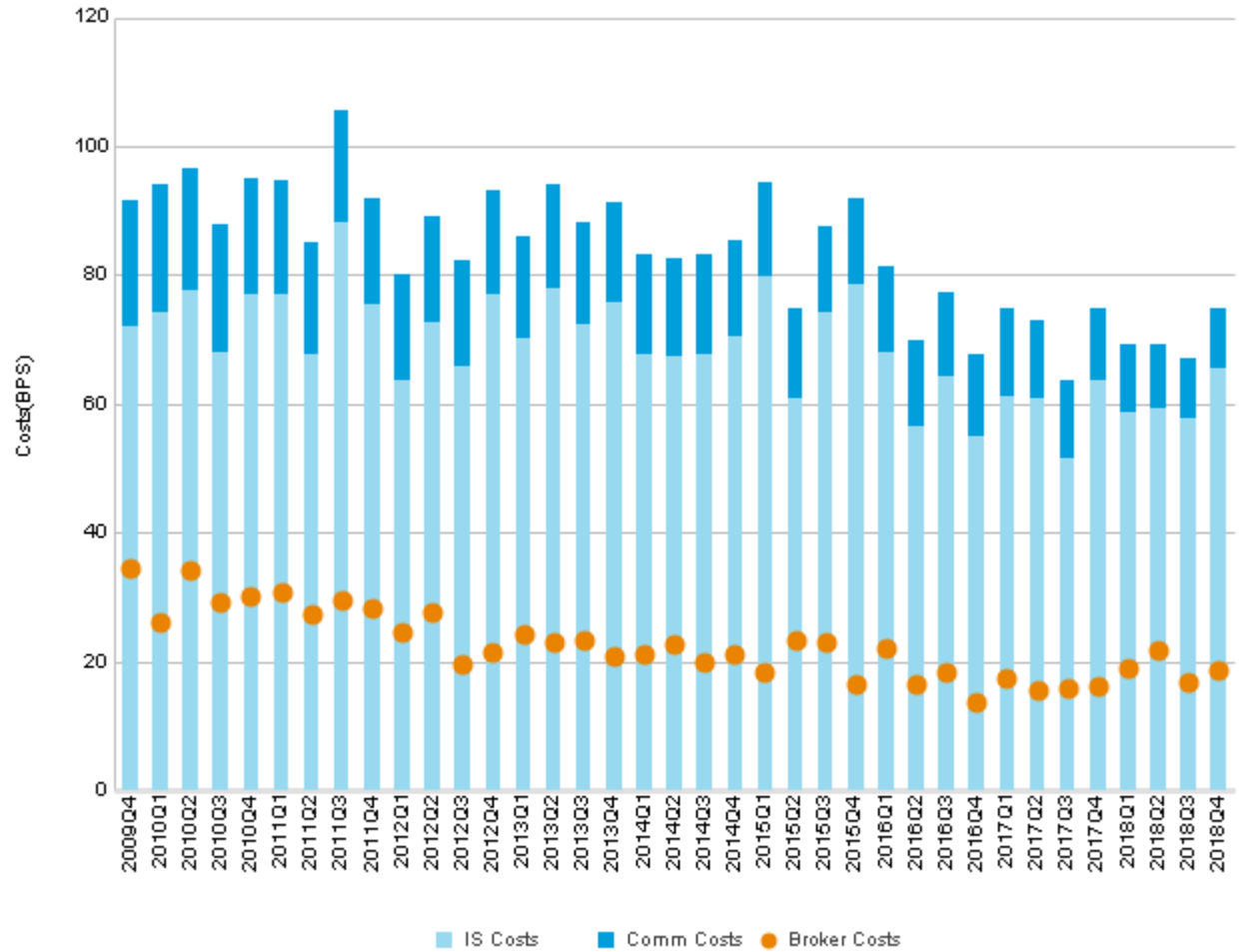
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	81,972
(2 , 4)	153,226
(4 , 6)	60,353
(6 , 8)	41,130
(8 , 10)	11,323
(10 , 12)	10,890
(12 , 14)	6,491
(14 , 16)	11,039
(16 , 18)	1,531
(18 , 20)	1,558
(20 , 22)	1,333
(22 , 24)	86
(24 , 26)	77
(26 , 28)	53
(28 , 30)	178
(30 , 32)	12
(32 , 34)	58
(34 , 36)	99
(36 , 38)	181
(38 , 40)	1
> 40	1,830
<b>Total</b>	<b>383,421</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	5.1	114
Small Cap	7.0	1,188
Mid Cap	5.2	42,537
Large Cap	4.7	339,582
<b>Total</b>	<b>4.8</b>	<b>383,421</b>

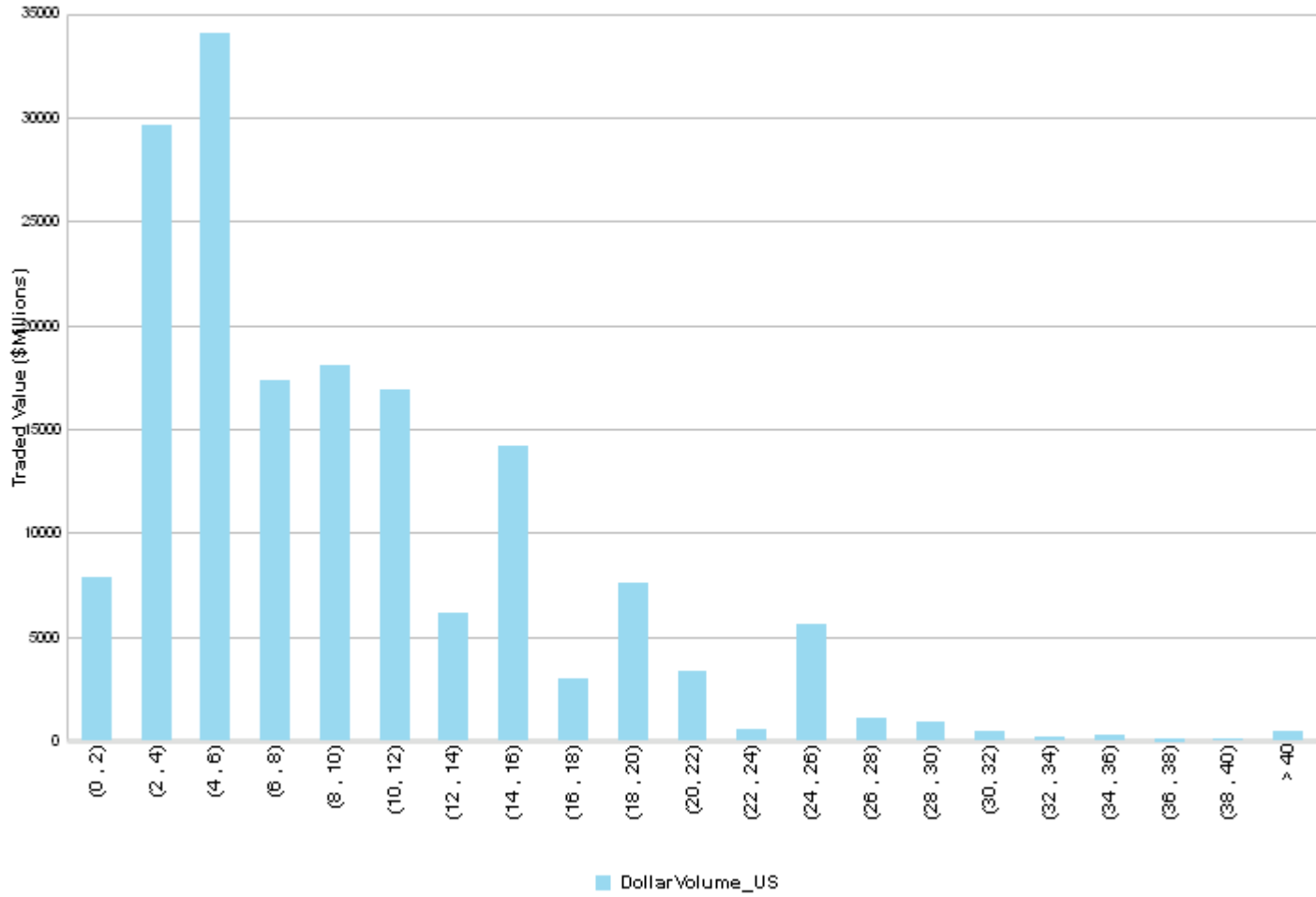
# Emerging Markets (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	72.1	19.4	91.5	34.4
2010Q1	74.1	19.9	94.0	26.0
2010Q2	77.7	18.9	96.6	34.2
2010Q3	67.9	19.9	87.8	29.4
2010Q4	77.2	17.7	94.9	30.3
2011Q1	77.0	17.7	94.7	30.9
2011Q2	67.7	17.3	85.0	27.5
2011Q3	88.3	17.3	105.7	29.6
2011Q4	75.6	16.3	91.9	28.2
2012Q1	63.8	16.2	80.0	24.5
2012Q2	72.8	16.2	89.1	27.7
2012Q3	66.0	16.3	82.3	19.6
2012Q4	77.0	16.2	93.3	21.5
2013Q1	70.3	15.7	86.0	24.3
2013Q2	78.1	16.0	94.1	23.1
2013Q3	72.3	15.8	88.1	23.3
2013Q4	75.8	15.5	91.3	21.0
2014Q1	67.7	15.6	83.3	21.3
2014Q2	67.5	15.1	82.6	22.6
2014Q3	67.8	15.4	83.2	20.0
2014Q4	70.4	14.9	85.3	21.2
2015Q1	79.8	14.6	94.4	18.4
2015Q2	60.9	14.0	74.9	23.5
2015Q3	74.3	13.2	87.5	23.0
2015Q4	78.7	13.1	91.8	16.5
2016Q1	68.0	13.4	81.3	22.1
2016Q2	56.6	13.3	69.9	16.5
2016Q3	64.3	12.9	77.3	18.4
2016Q4	55.0	12.7	67.7	13.8
2017Q1	61.3	13.5	74.8	17.5
2017Q2	60.9	12.3	73.1	15.6
2017Q3	51.5	12.0	63.6	15.8
2017Q4	63.6	11.1	74.7	16.2
2018Q1	58.9	10.3	69.2	19.0
2018Q2	59.3	9.9	69.3	21.7
2018Q3	57.9	9.3	67.2	17.0
2018Q4	65.5	9.5	75.0	18.8



# Emerging Markets Commission (BPS)

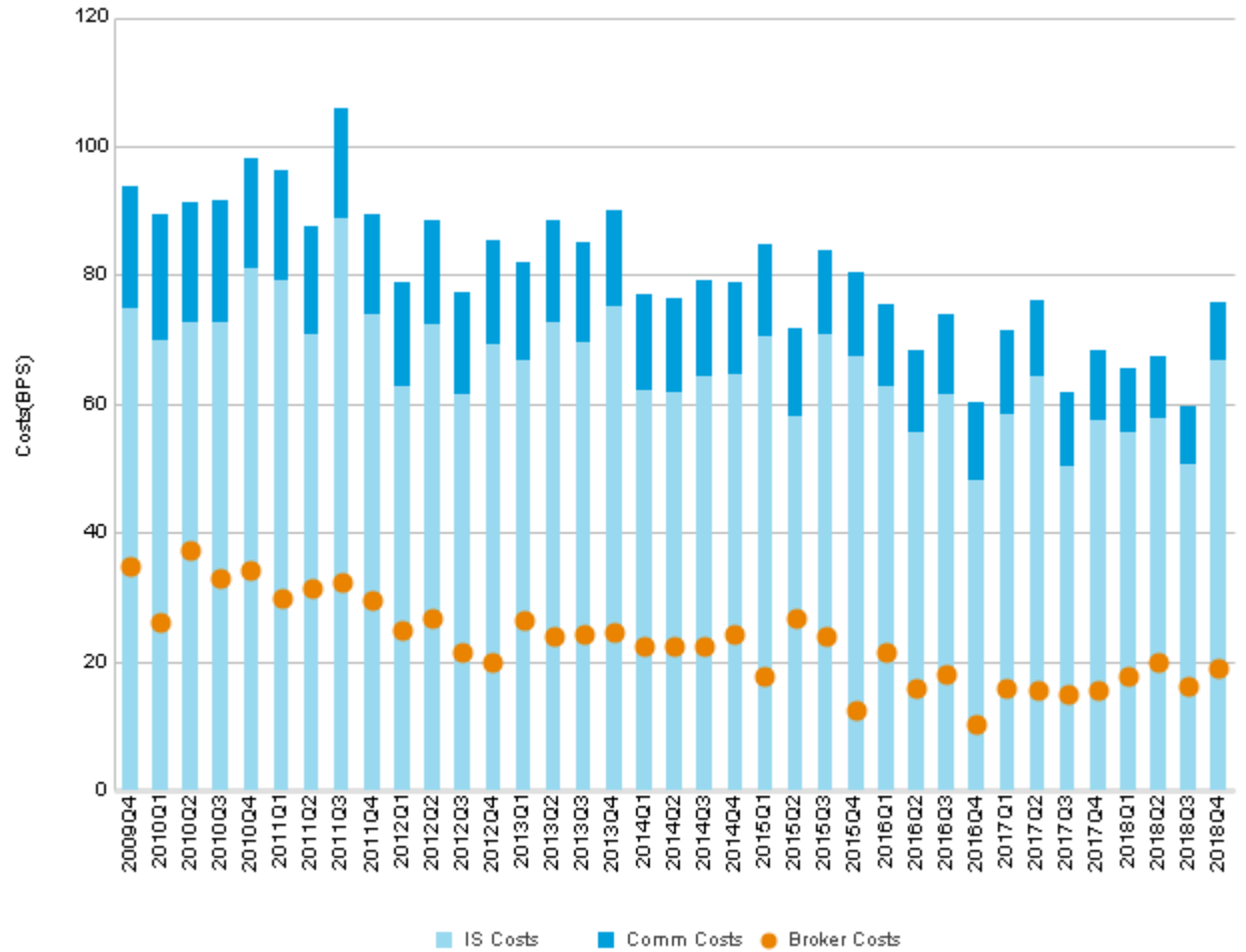
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	7,907
(2 , 4)	29,606
(4 , 6)	34,108
(6 , 8)	17,352
(8 , 10)	18,051
(10 , 12)	16,879
(12 , 14)	6,200
(14 , 16)	14,156
(16 , 18)	3,023
(18 , 20)	7,616
(20 , 22)	3,350
(22 , 24)	571
(24 , 26)	5,627
(26 , 28)	1,102
(28 , 30)	895
(30 , 32)	509
(32 , 34)	227
(34 , 36)	314
(36 , 38)	35
(38 , 40)	144
> 40	422
<b>Total</b>	<b>168,093</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	11.0	369
Small Cap	8.6	2,786
Mid Cap	9.4	44,639
Large Cap	9.5	120,298
<b>Total</b>	<b>9.5</b>	<b>168,093</b>

# Emerging Asia (BPS)

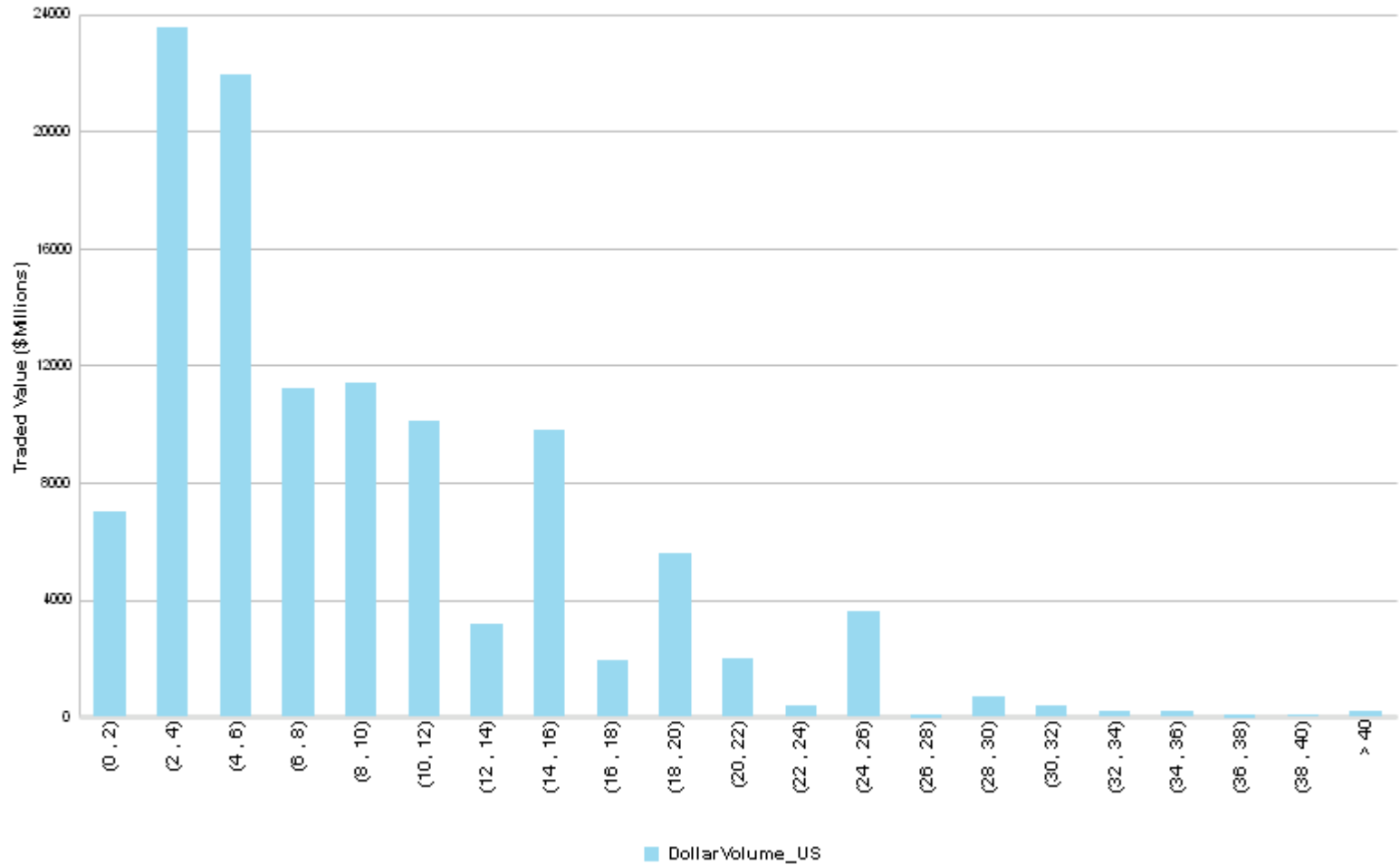
Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	74.9	19.0	93.9	34.8
2010Q1	69.9	19.7	89.6	26.3
2010Q2	72.6	18.8	91.4	37.4
2010Q3	72.6	18.9	91.5	33.0
2010Q4	81.0	17.3	98.3	34.3
2011Q1	79.1	17.3	96.4	29.8
2011Q2	70.7	16.9	87.6	31.4
2011Q3	88.8	17.0	105.8	32.4
2011Q4	73.8	15.8	89.6	29.7
2012Q1	62.9	15.9	78.7	24.9
2012Q2	72.5	15.9	88.5	26.9
2012Q3	61.4	15.9	77.3	21.6
2012Q4	69.4	15.9	85.3	20.0
2013Q1	66.8	15.3	82.1	26.4
2013Q2	72.8	15.8	88.6	24.1
2013Q3	69.7	15.5	85.2	24.2
2013Q4	75.1	15.0	90.0	24.6
2014Q1	62.1	15.1	77.1	22.5
2014Q2	61.8	14.7	76.5	22.4
2014Q3	64.3	15.0	79.3	22.3
2014Q4	64.6	14.5	79.0	24.2
2015Q1	70.4	14.3	84.7	17.7
2015Q2	58.1	13.7	71.8	26.9
2015Q3	70.9	12.9	83.8	24.1
2015Q4	67.4	12.9	80.3	12.4
2016Q1	62.6	12.9	75.5	21.4
2016Q2	55.5	12.8	68.3	15.9
2016Q3	61.4	12.6	74.0	18.1
2016Q4	48.0	12.3	60.4	10.2
2017Q1	58.5	13.1	71.6	16.0
2017Q2	64.4	11.9	76.3	15.6
2017Q3	50.3	11.5	61.8	15.1
2017Q4	57.6	10.7	68.3	15.7
2018Q1	55.6	10.0	65.6	17.6
2018Q2	57.8	9.5	67.3	20.0
2018Q3	50.6	9.0	59.7	16.3
2018Q4	66.7	9.0	75.8	19.2





# Emerging Asia Commission (BPS)

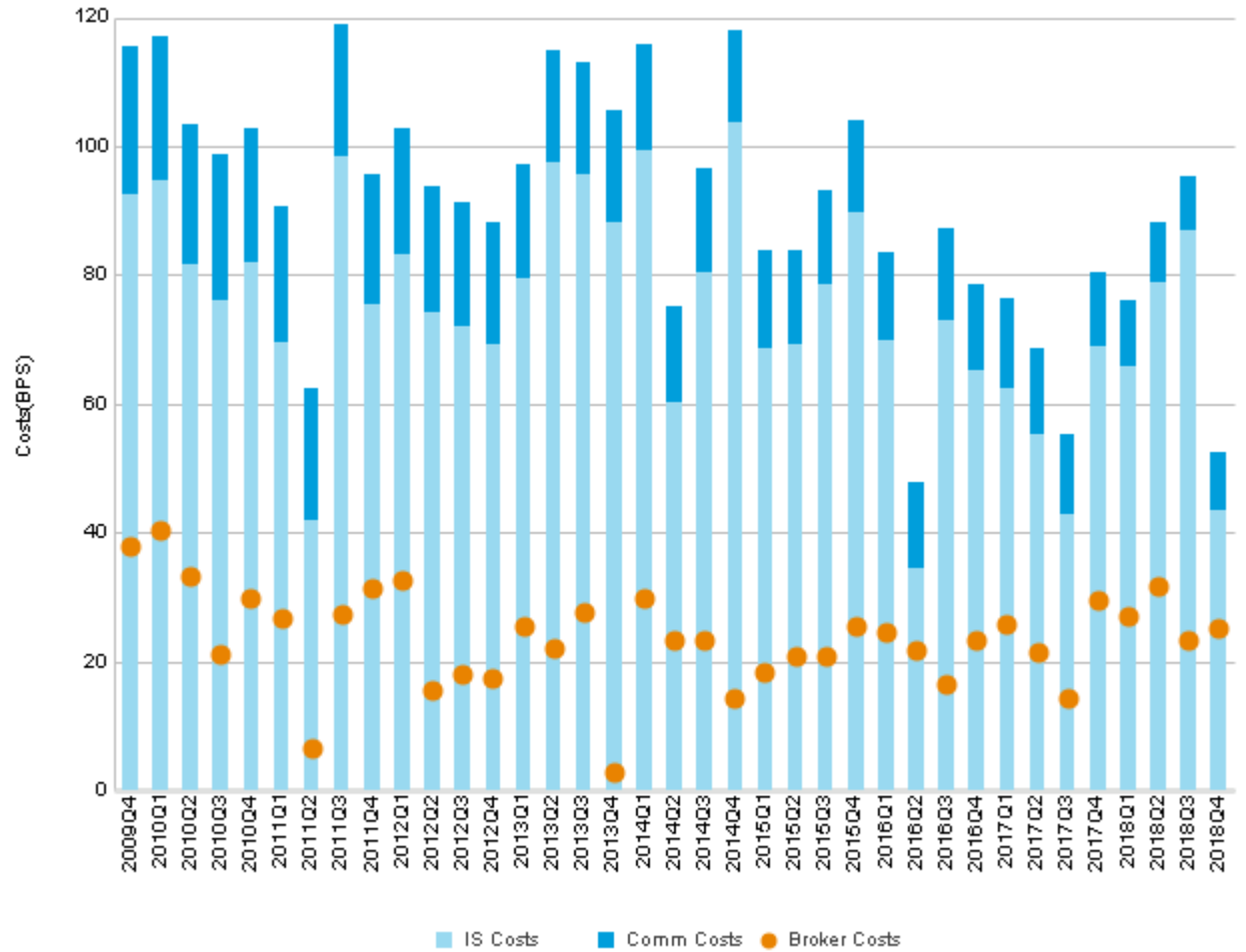
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	7,038
(2 , 4)	23,545
(4 , 6)	21,913
(6 , 8)	11,199
(8 , 10)	11,389
(10 , 12)	10,127
(12 , 14)	3,140
(14 , 16)	9,823
(16 , 18)	1,910
(18 , 20)	5,584
(20 , 22)	1,975
(22 , 24)	398
(24 , 26)	3,625
(26 , 28)	37
(28 , 30)	674
(30 , 32)	406
(32 , 34)	199
(34 , 36)	224
(36 , 38)	8
(38 , 40)	99
> 40	193
<b>Total</b>	<b>113,505</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	10.8	310
Small Cap	8.0	2,173
Mid Cap	8.7	27,039
Large Cap	9.1	83,982
<b>Total</b>	<b>9.0</b>	<b>113,505</b>

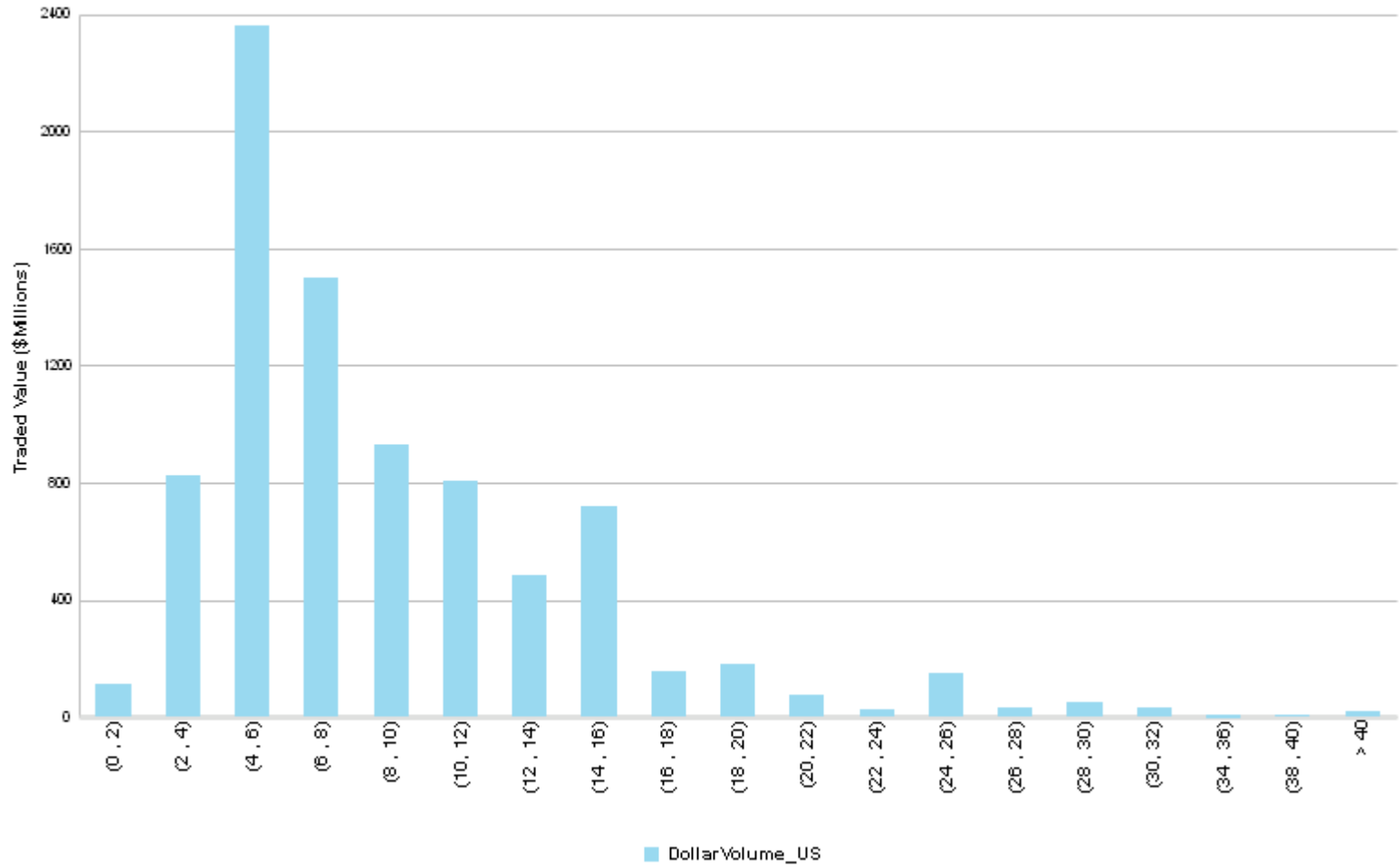
# Emerging Europe (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	92.6	22.9	115.5	37.9
2010Q1	94.7	22.5	117.2	40.5
2010Q2	81.8	21.5	103.3	33.2
2010Q3	76.0	22.8	98.8	21.3
2010Q4	82.0	20.8	102.8	29.8
2011Q1	69.7	21.1	90.8	26.7
2011Q2	42.1	20.5	62.6	6.7
2011Q3	98.4	20.4	118.8	27.3
2011Q4	75.6	20.0	95.6	31.3
2012Q1	83.2	19.6	102.8	32.8
2012Q2	74.4	19.4	93.8	15.7
2012Q3	72.1	19.3	91.4	18.2
2012Q4	69.4	18.8	88.2	17.6
2013Q1	79.4	17.7	97.1	25.4
2013Q2	97.4	17.5	114.9	22.0
2013Q3	95.7	17.5	113.1	27.6
2013Q4	88.3	17.4	105.7	2.8
2014Q1	99.4	16.6	116.0	30.0
2014Q2	60.2	15.0	75.2	23.3
2014Q3	80.6	16.1	96.7	23.3
2014Q4	103.8	14.1	118.0	14.2
2015Q1	68.5	15.3	83.8	18.4
2015Q2	69.3	14.7	83.9	20.9
2015Q3	78.5	14.7	93.2	21.0
2015Q4	89.7	14.5	104.2	25.5
2016Q1	69.8	13.7	83.5	24.6
2016Q2	34.4	13.5	47.8	21.9
2016Q3	73.1	14.3	87.4	16.5
2016Q4	65.2	13.4	78.6	23.4
2017Q1	62.3	14.2	76.6	25.8
2017Q2	55.2	13.3	68.5	21.6
2017Q3	42.9	12.6	55.4	14.4
2017Q4	69.0	11.6	80.6	29.7
2018Q1	66.0	10.2	76.2	27.2
2018Q2	79.0	9.3	88.3	31.9
2018Q3	87.0	8.5	95.5	23.2
2018Q4	43.5	9.0	52.5	25.3



# Emerging Europe Commission (BPS)

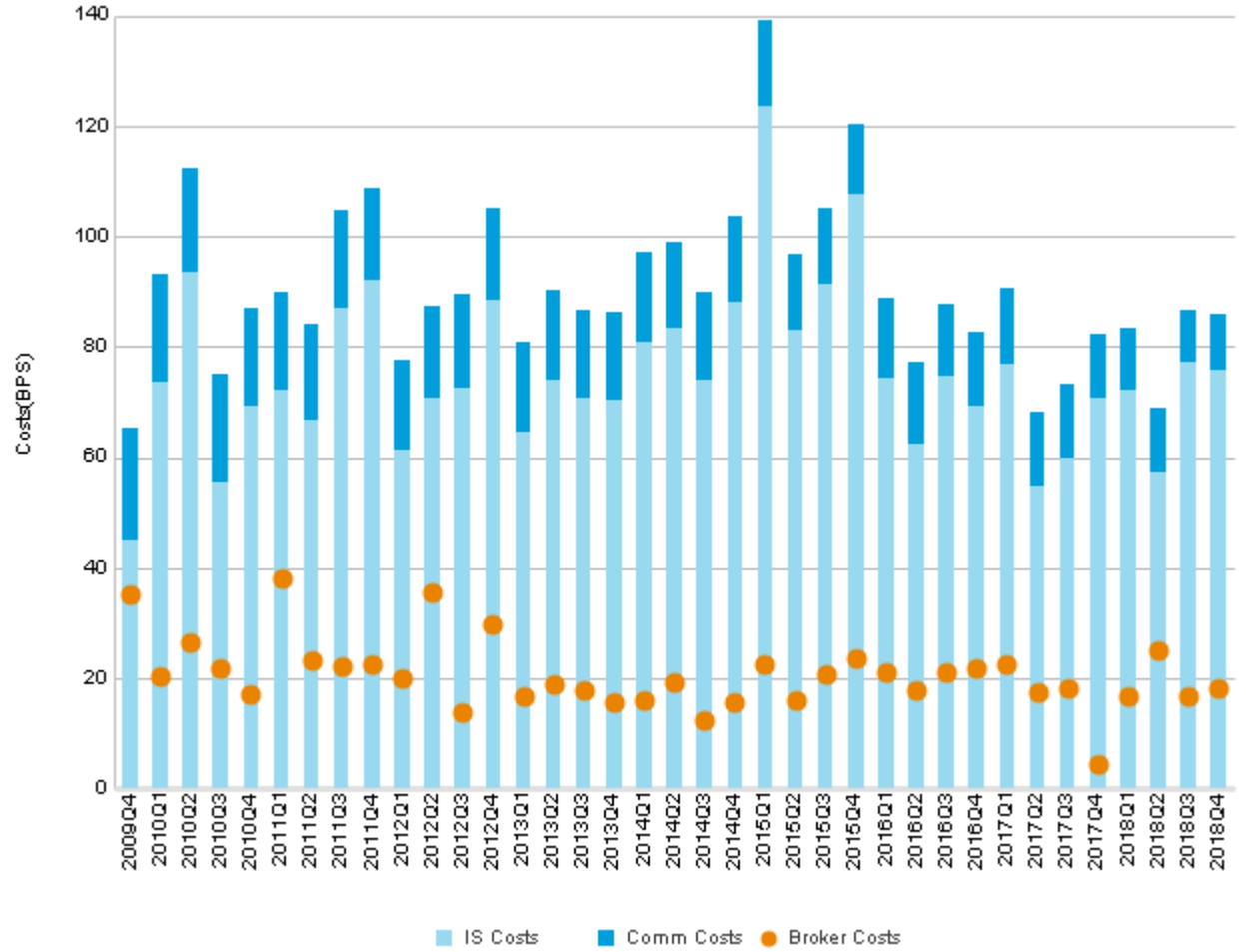
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	116
(2 , 4)	828
(4 , 6)	2,360
(6 , 8)	1,502
(8 , 10)	928
(10 , 12)	807
(12 , 14)	484
(14 , 16)	722
(16 , 18)	154
(18 , 20)	180
(20 , 22)	78
(22 , 24)	27
(24 , 26)	149
(26 , 28)	34
(28 , 30)	49
(30 , 32)	30
(34 , 36)	4
(38 , 40)	6
> 40	17
<b>Total</b>	<b>8,472</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	9.5	26
Small Cap	8.3	230
Mid Cap	9.3	3,873
Large Cap	8.8	4,344
<b>Total</b>	<b>9.0</b>	<b>8,472</b>

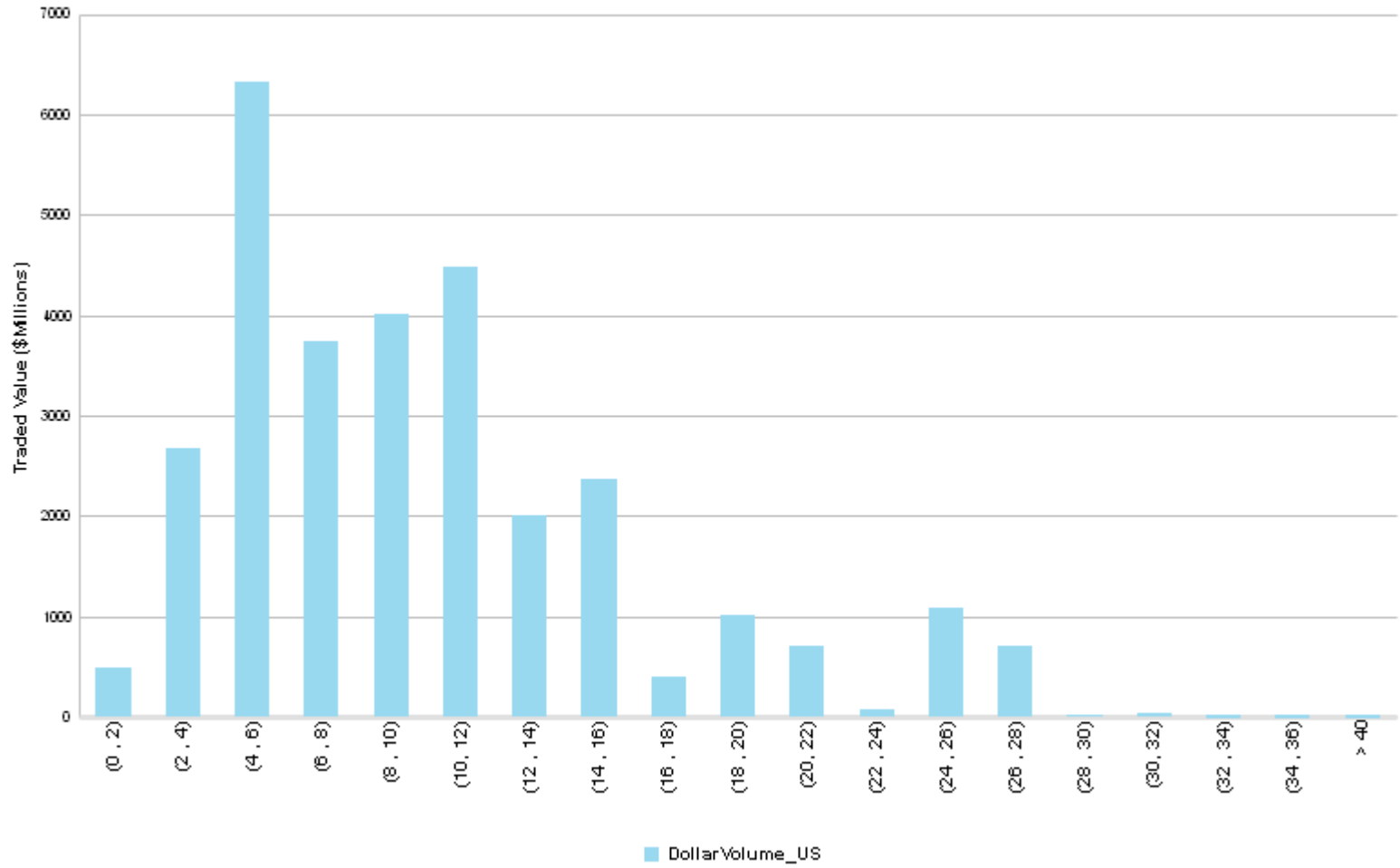
# Latin America (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	44.9	20.2	65.1	35.2
2010Q1	73.7	19.4	93.1	20.3
2010Q2	93.4	18.9	112.3	26.4
2010Q3	55.5	19.6	75.1	21.7
2010Q4	69.2	17.7	86.9	17.1
2011Q1	72.0	18.0	90.0	38.2
2011Q2	66.8	17.4	84.2	23.1
2011Q3	87.0	17.7	104.6	22.3
2011Q4	92.1	16.7	108.8	22.4
2012Q1	61.1	16.5	77.7	20.0
2012Q2	70.8	16.5	87.3	35.5
2012Q3	72.6	16.8	89.5	14.0
2012Q4	88.5	16.6	105.1	29.8
2013Q1	64.6	16.2	80.8	16.9
2013Q2	74.1	16.1	90.2	18.9
2013Q3	70.7	15.9	86.6	17.9
2013Q4	70.5	15.8	86.4	15.8
2014Q1	80.9	16.2	97.1	16.2
2014Q2	83.5	15.5	99.0	19.4
2014Q3	73.9	15.9	89.8	12.3
2014Q4	88.1	15.5	103.5	15.7
2015Q1	123.6	15.4	139.0	22.5
2015Q2	82.9	14.0	96.9	16.1
2015Q3	91.3	13.7	104.9	20.6
2015Q4	107.5	12.9	120.3	23.7
2016Q1	74.5	14.4	88.9	21.0
2016Q2	62.4	14.7	77.1	18.0
2016Q3	74.6	13.2	87.8	21.2
2016Q4	69.3	13.2	82.6	21.7
2017Q1	76.7	14.1	90.8	22.4
2017Q2	54.9	13.2	68.1	17.6
2017Q3	59.7	13.5	73.1	18.2
2017Q4	70.8	11.5	82.2	4.6
2018Q1	72.1	11.4	83.5	16.6
2018Q2	57.4	11.3	68.8	25.0
2018Q3	77.1	9.6	86.7	16.9
2018Q4	75.8	10.2	86.0	18.4



# Latin America Commission (BPS)

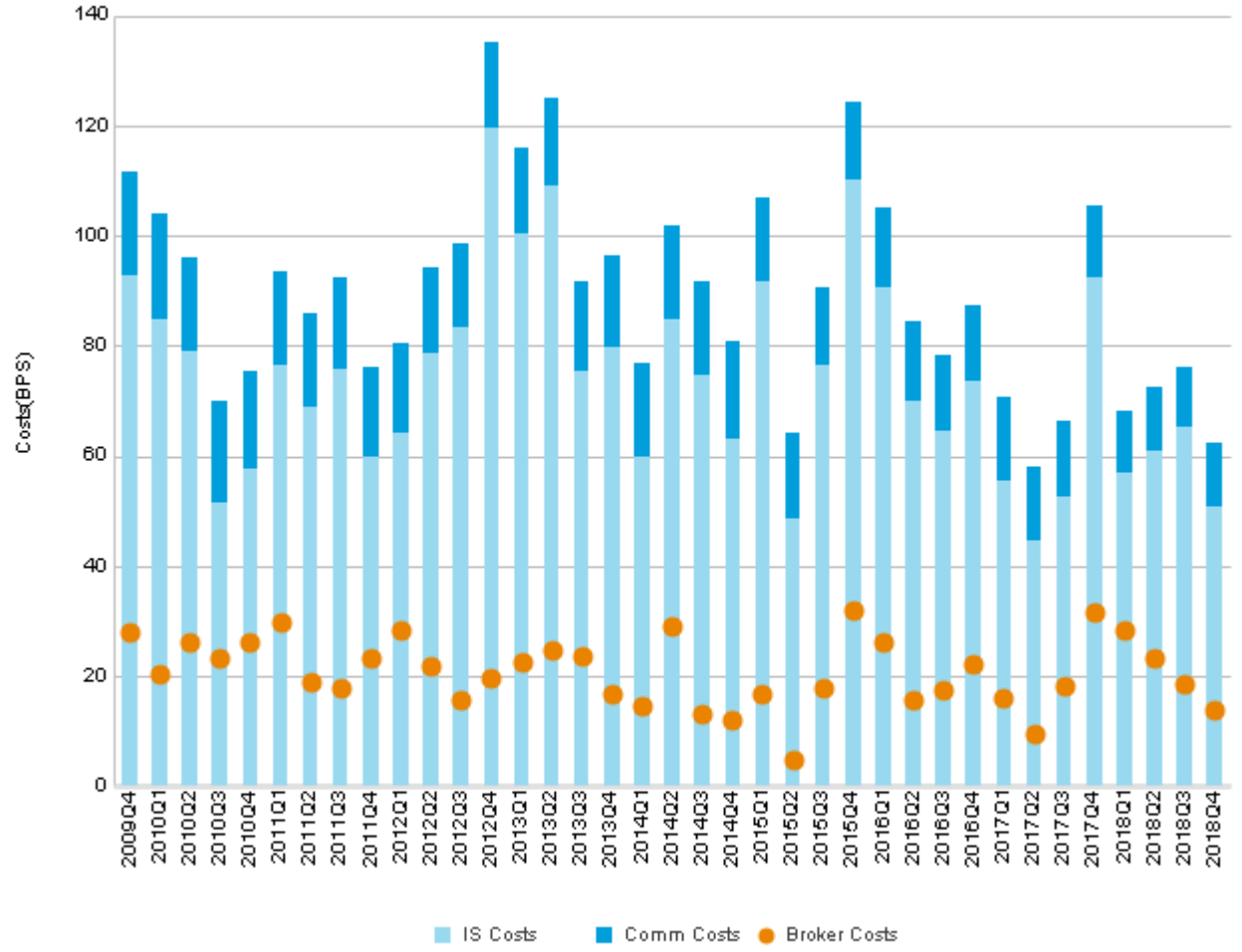
Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	492
(2 , 4)	2,678
(4 , 6)	6,320
(6 , 8)	3,746
(8 , 10)	4,009
(10 , 12)	4,481
(12 , 14)	2,000
(14 , 16)	2,363
(16 , 18)	401
(18 , 20)	1,013
(20 , 22)	709
(22 , 24)	71
(24 , 26)	1,084
(26 , 28)	702
(28 , 30)	27
(30 , 32)	39
(32 , 34)	2
(34 , 36)	6
> 40	4
<b>Total</b>	<b>30,148</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	8.1	18
Small Cap	9.6	180
Mid Cap	10.6	8,925
Large Cap	10.1	21,025
<b>Total</b>	<b>10.2</b>	<b>30,148</b>

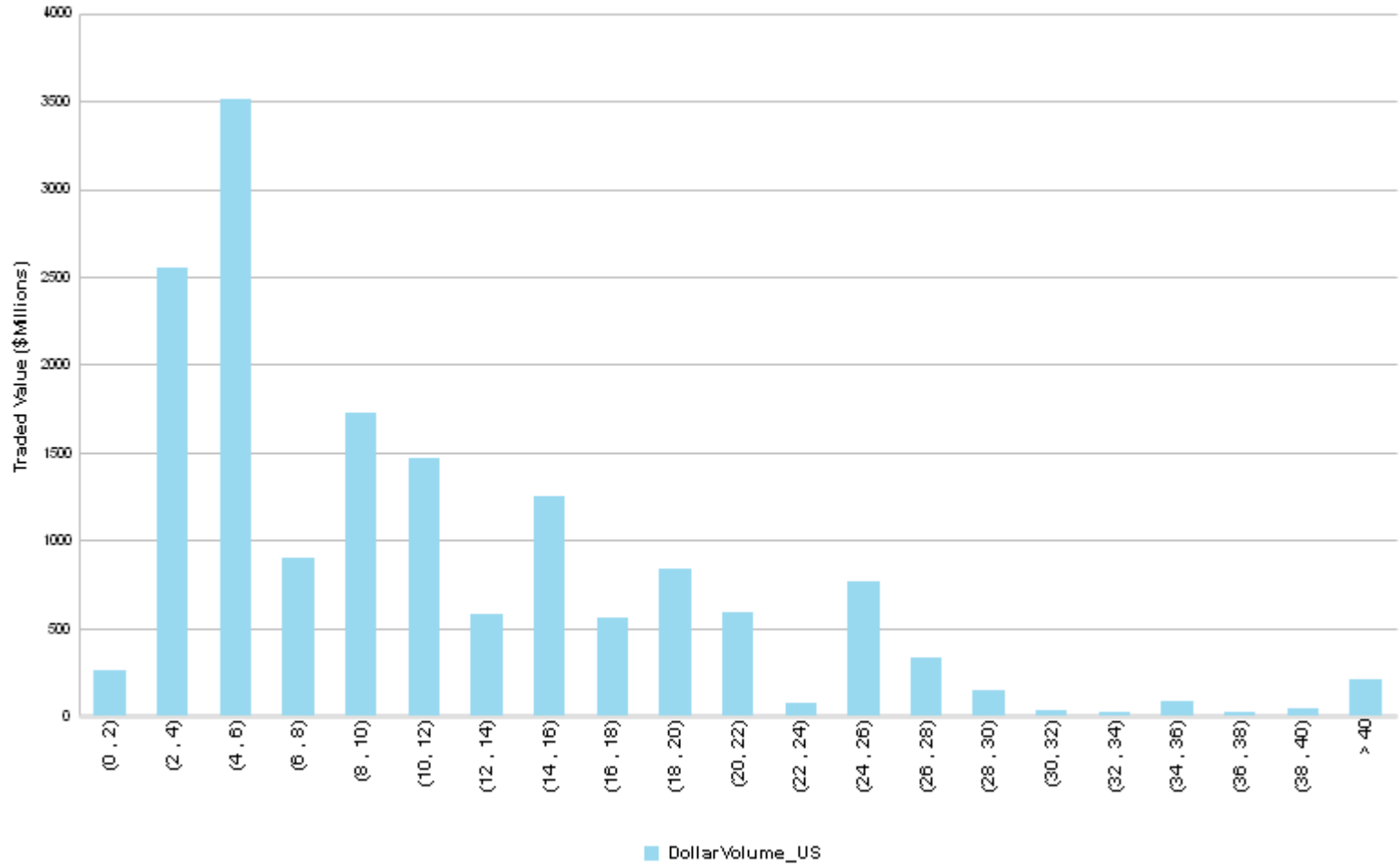
# Africa and Middle East (BPS)

Quarter	IS Costs	Comm Costs	Total Costs	Broker Costs
2009Q4	92.7	19.0	111.7	28.0
2010Q1	84.7	19.3	104.0	20.4
2010Q2	79.0	17.2	96.2	26.1
2010Q3	51.5	18.3	69.8	23.4
2010Q4	57.8	17.5	75.3	26.1
2011Q1	76.6	17.0	93.6	29.8
2011Q2	68.7	17.1	85.8	19.0
2011Q3	75.9	16.7	92.6	17.7
2011Q4	60.0	16.3	76.3	23.2
2012Q1	64.2	16.4	80.6	28.3
2012Q2	78.8	15.5	94.3	21.7
2012Q3	83.2	15.3	98.5	15.5
2012Q4	119.4	15.6	135.1	19.8
2013Q1	100.4	15.4	115.8	22.7
2013Q2	109.0	16.0	125.0	24.7
2013Q3	75.4	16.2	91.6	23.5
2013Q4	79.7	16.6	96.3	16.6
2014Q1	59.7	17.3	77.1	14.5
2014Q2	84.8	16.9	101.7	29.0
2014Q3	74.7	17.1	91.8	13.0
2014Q4	63.0	17.9	81.0	12.2
2015Q1	91.8	15.0	106.8	16.7
2015Q2	48.6	15.4	64.0	4.7
2015Q3	76.5	14.2	90.7	17.8
2015Q4	110.1	14.1	124.2	31.8
2016Q1	90.5	14.7	105.3	26.1
2016Q2	70.0	14.4	84.4	15.6
2016Q3	64.4	14.1	78.4	17.4
2016Q4	73.7	13.6	87.3	22.2
2017Q1	55.6	15.1	70.7	15.9
2017Q2	44.6	13.5	58.1	9.7
2017Q3	52.7	13.7	66.4	18.3
2017Q4	92.4	12.9	105.3	31.7
2018Q1	56.9	11.2	68.1	28.2
2018Q2	60.9	11.5	72.4	23.2
2018Q3	65.3	10.9	76.2	18.4
2018Q4	50.9	11.3	62.3	13.9



# Africa and Middle East Commission (BPS)

Commission (BPS)	Traded Value (USD Millions)
(0 , 2)	261
(2 , 4)	2,556
(4 , 6)	3,515
(6 , 8)	904
(8 , 10)	1,725
(10 , 12)	1,464
(12 , 14)	576
(14 , 16)	1,248
(16 , 18)	558
(18 , 20)	838
(20 , 22)	588
(22 , 24)	75
(24 , 26)	769
(26 , 28)	330
(28 , 30)	145
(30 , 32)	33
(32 , 34)	26
(34 , 36)	80
(36 , 38)	27
(38 , 40)	39
> 40	207
<b>Total</b>	<b>15,967</b>



Market Cap	Avg Commission (BPS)	Traded Value (USD Millions)
Micro Cap	21.4	15
Small Cap	14.8	204
Mid Cap	11.2	4,802
Large Cap	11.3	10,946
<b>Total</b>	<b>11.3</b>	<b>15,967</b>

## Appendix

Region	Country
United States	United States
United Kingdom	United Kingdom
Japan	Japan
Canada	Canada
Europe ex UK	Andorra
Europe ex UK	Austria
Europe ex UK	Belgium
Europe ex UK	Cyprus
Europe ex UK	Denmark
Europe ex UK	EU Commission
Europe ex UK	Eurozone
Europe ex UK	Faeroe Island
Europe ex UK	Finland
Europe ex UK	France
Europe ex UK	Germany
Europe ex UK	Gibraltar
Europe ex UK	Greece
Europe ex UK	Greenland
Europe ex UK	Guernsey
Europe ex UK	Iceland
Europe ex UK	Ireland
Europe ex UK	Isle Of Mann
Europe ex UK	Italy
Europe ex UK	Jersey
Europe ex UK	Liechtenstein
Europe ex UK	Luxembourg
Europe ex UK	Monaco
Europe ex UK	Netherlands
Europe ex UK	Norway
Europe ex UK	Portugal

Region	Country
Europe ex UK	Spain
Europe ex UK	Sweden
Europe ex UK	Switzerland
Asia Pacific ex Japan	Australia
Asia Pacific ex Japan	Hong Kong
Asia Pacific ex Japan	New Zealand
Asia Pacific ex Japan	Singapore
Emerging Asia	Afghanistan
Emerging Asia	Bangladesh
Emerging Asia	Bhutan
Emerging Asia	Brunei
Emerging Asia	Cambodia
Emerging Asia	China
Emerging Asia	Christmas Is.
Emerging Asia	East Timor
Emerging Asia	Fiji
Emerging Asia	French Pacific
Emerging Asia	Guam
Emerging Asia	Heard/Macdonld
Emerging Asia	India
Emerging Asia	Indonesia
Emerging Asia	Kazakhstan
Emerging Asia	Kiribati
Emerging Asia	Laos
Emerging Asia	Macau
Emerging Asia	Malaysia
Emerging Asia	Maldives
Emerging Asia	Marshall Island
Emerging Asia	Mongolia
Emerging Asia	Myanmar

Region	Country
Emerging Asia	Nauru Island
Emerging Asia	Nepal
Emerging Asia	Norfolk Island
Emerging Asia	North Korea
Emerging Asia	Pakistan
Emerging Asia	Palau
Emerging Asia	Papua N.Guinea
Emerging Asia	Philippines
Emerging Asia	Pitcairn Is.
Emerging Asia	Samoa
Emerging Asia	Samoa (West)
Emerging Asia	Solomon Island
Emerging Asia	South Korea
Emerging Asia	Sri Lanka
Emerging Asia	Taiwan
Emerging Asia	Thailand
Emerging Asia	Tokelau
Emerging Asia	Tonga
Emerging Asia	Tuvalu
Emerging Asia	Vanuatu
Emerging Asia	Vietnam
Emerging Europe	Albania
Emerging Europe	Armenia
Emerging Europe	Belarus
Emerging Europe	Bosnia & Herzeg
Emerging Europe	Bouvet Island
Emerging Europe	Bulgaria
Emerging Europe	Croatia
Emerging Europe	Czech
Emerging Europe	Estonia



## Appendix

Region	Country
Emerging Europe	Georgia
Emerging Europe	Hungary
Emerging Europe	Latvia
Emerging Europe	Lithuania
Emerging Europe	Macedonia
Emerging Europe	Malta
Emerging Europe	Moldova
Emerging Europe	Poland
Emerging Europe	Romania
Emerging Europe	Russia
Emerging Europe	San Marino
Emerging Europe	Serbia
Emerging Europe	Slovakia
Emerging Europe	Slovenia
Emerging Europe	Turkey
Emerging Europe	Ukraine
Emerging Europe	Yugoslavia
Latin America	Antigua & Barbu
Latin America	Argentina
Latin America	Aruba
Latin America	Barbados
Latin America	Belize
Latin America	Bolivia
Latin America	Brazil
Latin America	British Virgin
Latin America	Cayman Islands
Latin America	Chile
Latin America	Cocos
Latin America	Columbia
Latin America	Costa Rica
Latin America	Cuba
Latin America	Dominica
Latin America	Dominican Repub
Latin America	Ecuador
Latin America	El Salvador
Latin America	Falkland Is.

Region	Country
Latin America	French Guiana
Latin America	Grenada
Latin America	Guadeloupe
Latin America	Guatemala
Latin America	Guyana
Latin America	Haiti
Latin America	Honduras
Latin America	Jamaica
Latin America	Martinique
Latin America	Mexico
Latin America	Montserrat
Latin America	Neth. Antilles
Latin America	Nicaragua
Latin America	Panama
Latin America	Paraguay
Latin America	Pery
Latin America	Puerto Rico
Latin America	St. Kitts & Nev
Latin America	St. Lucia
Latin America	St. Vincent
Latin America	Suriname
Latin America	Trinidad
Latin America	Turks & Caicos
Latin America	Uruguay
Latin America	Venezuela
Latin America	Virgin Islands
Middle East and Africa	Algeria
Middle East and Africa	Angola
Middle East and Africa	Azerbaijan
Middle East and Africa	Bahrain
Middle East and Africa	Benin
Middle East and Africa	Botswana
Middle East and Africa	Br. Indn Ocean
Middle East and Africa	Burkina Faso
Middle East and Africa	Burundi
Middle East and Africa	Cameron

Region	Country
Middle East and Africa	Cape Verde
Middle East and Africa	Central Africa
Middle East and Africa	Chad
Middle East and Africa	Comoros
Middle East and Africa	Congo
Middle East and Africa	Dem. Rep. Congo
Middle East and Africa	Djibouti
Middle East and Africa	Egypt
Middle East and Africa	Eritrea
Middle East and Africa	Ethiopia
Middle East and Africa	Gabon
Middle East and Africa	Gambia
Middle East and Africa	Ghana
Middle East and Africa	Guinea
Middle East and Africa	Guinea-Bissau
Middle East and Africa	Iran
Middle East and Africa	Iraq
Middle East and Africa	Israel
Middle East and Africa	Ivory Cost
Middle East and Africa	Jordan
Middle East and Africa	Kenya
Middle East and Africa	Kuwait
Middle East and Africa	Kyrgyzstan
Middle East and Africa	Lebanon
Middle East and Africa	Lesotho
Middle East and Africa	Liberia
Middle East and Africa	Libya
Middle East and Africa	Madagascar
Middle East and Africa	Malawi
Middle East and Africa	Mali Republic
Middle East and Africa	Mauritania
Middle East and Africa	Mauritius
Middle East and Africa	Morocco
Middle East and Africa	Mozambique
Middle East and Africa	Namibia
Middle East and Africa	Niger Republic

## Appendix

<b>Region</b>	<b>Country</b>
Middle East and Africa	Nigeria
Middle East and Africa	Oman
Middle East and Africa	Qatar
Middle East and Africa	Reunion
Middle East and Africa	Rwanda
Middle East and Africa	Sao Tome
Middle East and Africa	Saudi Arabia
Middle East and Africa	Senegal
Middle East and Africa	Seychelles
Middle East and Africa	Sierra Leone
Middle East and Africa	Somali
Middle East and Africa	South Africa
Middle East and Africa	Sudan
Middle East and Africa	Swaziland
Middle East and Africa	Syria
Middle East and Africa	Tajikistan
Middle East and Africa	Tanzania
Middle East and Africa	Togo
Middle East and Africa	Tunisia
Middle East and Africa	Turkmenistan
Middle East and Africa	UAE
Middle East and Africa	Uganda
Middle East and Africa	Uzbekistan
Middle East and Africa	Yemen
Middle East and Africa	Zambia
Middle East and Africa	Zimbabwe

## Definitions

Traded Value (USD Millions) Principal value of all trades executed, shown in Millions (USD) found in ITG's Peer Universe

Trade Value (CAD Millions) Principal value of all trades executed, shown in Millions (CAD) found in ITG's Peer Universe

Average Commission (BPS)  $((\text{Shares Executed} * \text{TradePrice (USD)} * \text{CommissionPerShare(BPS)}) / (\text{SharesExecuted} * \text{tradePrice (USD)}))$

Average Commission (CAD CPS)  $((\text{Shares Executed} * \text{CommissionPerShare (CAD CPS)}) / (\text{Shares Executed}))$

Average Commission (USD CPS)  $((\text{Shares Executed} * \text{CommissionPerShare (USD CPS)}) / (\text{Shares Executed}))$

IS Cost (BPS) The difference, or slippage between the arrival price and the execution price for a trade.

Total Cost (BPS) The sum of Average Commission (BPS) and IS Cost (BPS)

Broker Cost (BPS) The difference, or slippage, between the broker arrival price and the execution price for a trade.

\* Daily exchange rate is used in all calculations

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