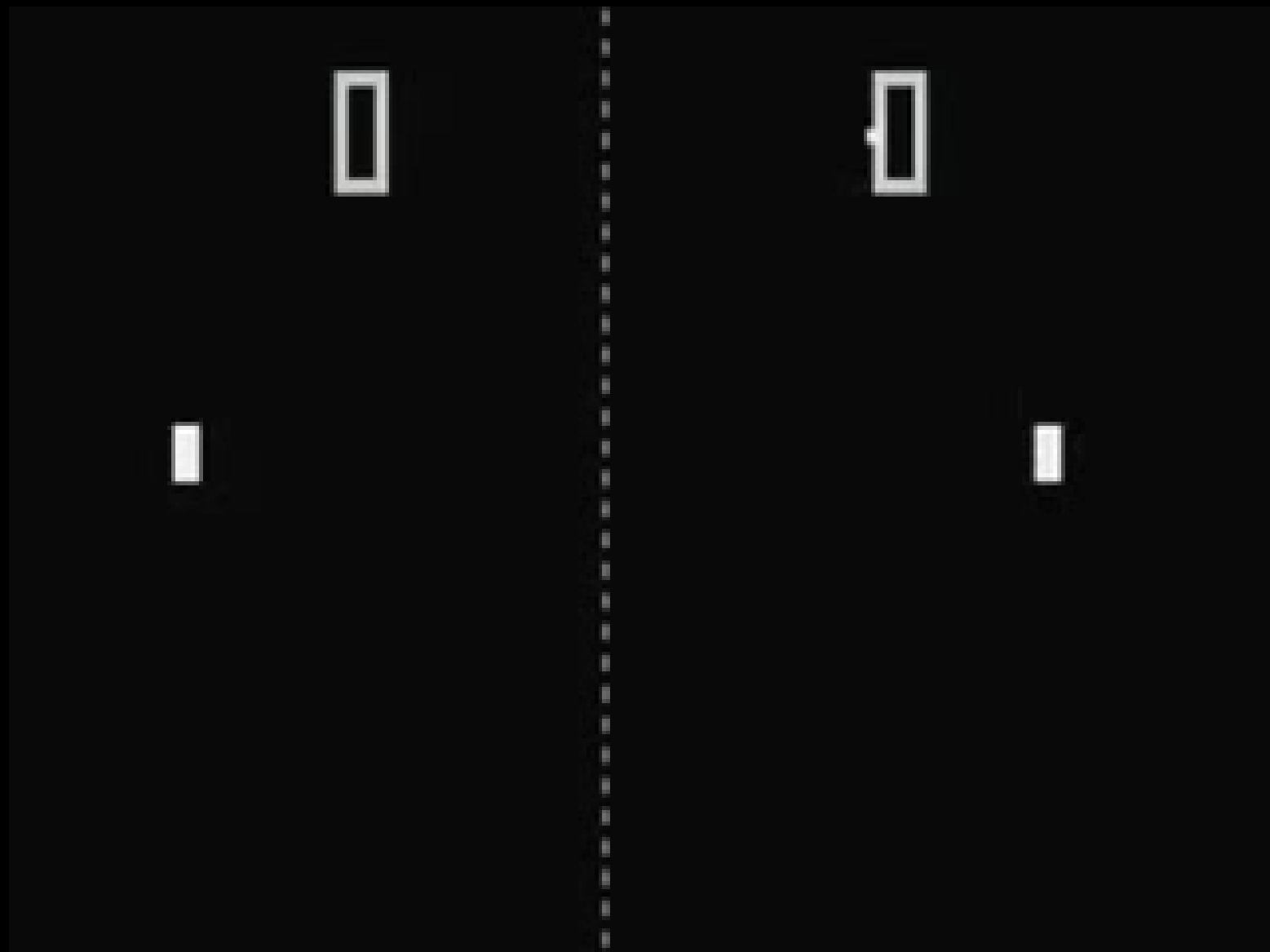




# **From Pong to the Pits to Single Pools: Convergence Lessons from the Securities Markets**

Thomas Ascher, President and CEO, Longitude  
Asian Racing Conference, May 6, 2014





2

3





30 30



1UP  
836000

HIGH SCORE  
836000







GRAN TURISMO 6

Arande Light  
Back To You


TOTAL

Sarho









THOMAS ASCHER

CHICAGO BOARD OPTIONS EXCHANGE 5:04 76°









CBOE Options Pit , 1970s







International Securities Exchange Holdings, Inc. Data Center





International Securities Exchange Holdings, Inc. Data Center





Regular Orderbook

ISE at NBBO | Customer on ISE BBO

Preferences | Close

Id MS Exp ALL New Search Replace Tab Remove Tab

MS																		Instrument		Put							
Call NBBO				Call															Id		BVol	Delta	BQty	Bid	Ask	AQty	AVol
BQty	Bid	Ask	AQty	Sts	Last	LQty	BVol	BQty	Bid	Ask	AQty	Rho	Theta	Vega	Gamma	Delta	AVol										
				Open	30.23	100			30.22	30.23								MS				30.22	30.23				
																		MS-WEO									
																		MS-4MAY									
274	9.20	9.30	2626	Regular				50	9.20	9.30	234	0.0099	-0.0052	0.0024	0.0070	0.9856	0.9448	MS4MAY21		-0.0092			0.03	689	0.8078		
402	7.20	7.30	1767	Regular				50	7.20	7.30	226	0.0107	-0.0049	0.0030	0.0110	0.9818	0.7410	MS4MAY23		-0.0117			0.03	371	0.6285		
832	6.20	6.30	3486	Regular				177	6.20	6.30	408	0.0111	-0.0048	0.0034	0.0143	0.9792	0.6439	MS4MAY24		-0.0134			0.03	648	0.5432		
1015	5.20	5.30	3194	Regular				194	5.20	5.30	540	0.0116	-0.0046	0.0038	0.0192	0.9758	0.5491	MS4MAY25		-0.0194			0.04	954	0.4834		
2172	4.20	4.30	2369	Regular				563	4.20	4.30	315	0.0120	-0.0044	0.0044	0.0270	0.9712	0.4559	MS4MAY26	0.3188	-0.0188	163	0.01	0.02	67	0.3535		
908	3.25	3.35	6603	Regular			0.2920	150	3.25	3.35	1117	0.0118	-0.0092	0.0091	0.0573	0.9282	0.4129	MS4MAY27	0.2977	-0.0508	114	0.03	0.06	599	0.3429		
1104	2.30	2.38	6331	Regular			0.2782	204	2.30	2.38	1222	0.0115	-0.0120	0.0136	0.1000	0.8762	0.3389	MS4MAY28	0.2817	-0.1049	86	0.08	0.10	160	0.2901		
778	1.43	1.49	4125	Regular	1.50	1	0.2500	158	1.43	1.49	728	0.0103	-0.0154	0.0201	0.1733	0.7709	0.2803	MS4MAY29	0.2516	-0.2204	98	0.21	0.22	23	0.2568		
151	0.73	0.74	90	Regular	0.80	1	0.2301	30	0.73	0.75	133	0.0079	-0.0176	0.0258	0.2563	0.5734	0.2340	MS4MAY30	0.2312	-0.4274	96	0.49	0.51	90	0.2351		
265	0.28	0.29	296	Regular			0.2220	71	0.28	0.29	68	0.0043	-0.0152	0.0233	0.2391	0.3110	0.2263	MS4MAY31	0.2173	-0.6896	62	1.04	1.06	133	0.2260		
122	0.08	0.09	811	Regular			0.2170	43	0.08	0.09	222	0.0017	-0.0084	0.0137	0.1398	0.1231	0.2246	MS4MAY32	0.1565	-0.9059	715	1.80	1.87	203	0.2257		
403	0.01	0.02	475	Regular			0.1978	86	0.01	0.02	118	0.0004	-0.0025	0.0047	0.0482	0.0296	0.2215	MS4MAY33		-0.9987	103	2.76	2.81	271	0.2393		
		0.03	3993	Regular						0.03	666	0.0003	-0.0027	0.0039	0.0318	0.0240	0.3019	MS4MAY34		-0.9293	697	3.70	3.85	982	0.3590		
		0.02	2587	Regular						0.02	225	0.0002	-0.0020	0.0026	0.0188	0.0150	0.3380	MS4MAY35		-0.9448	154	4.70	4.85	190	0.4126		
		0.01	2043	Regular						0.01	198	0.0001	-0.0012	0.0015	0.0098	0.0077	0.3552	MS4MAY36		-0.9450	124	5.70	5.85	254	0.4873		

Bin:6 | PMM:UBS Securities LLC

Regular | Complex Orderbook | Market Depth

Order Status (My Orders)

My Orders | Desk Orders | My Trades | Desk Trades | Other Filters...

Export | Print | Preferences | Close

Id Exp Search

Hide Fills

Order Book																Order History										
Id	StgType	Status	Date	Time	Sent Date/Time	Rcvd Date/Time	B/S	QTY	NotSentQty	SentQty	Prc	Bid/Ask	StepUp Prc	Open	Trade	Id	B/S	TPrc	Traded	Time	Date	P	OrdType	GUP	Clnt Cat	Sub Acc
No Orders																No Fills										

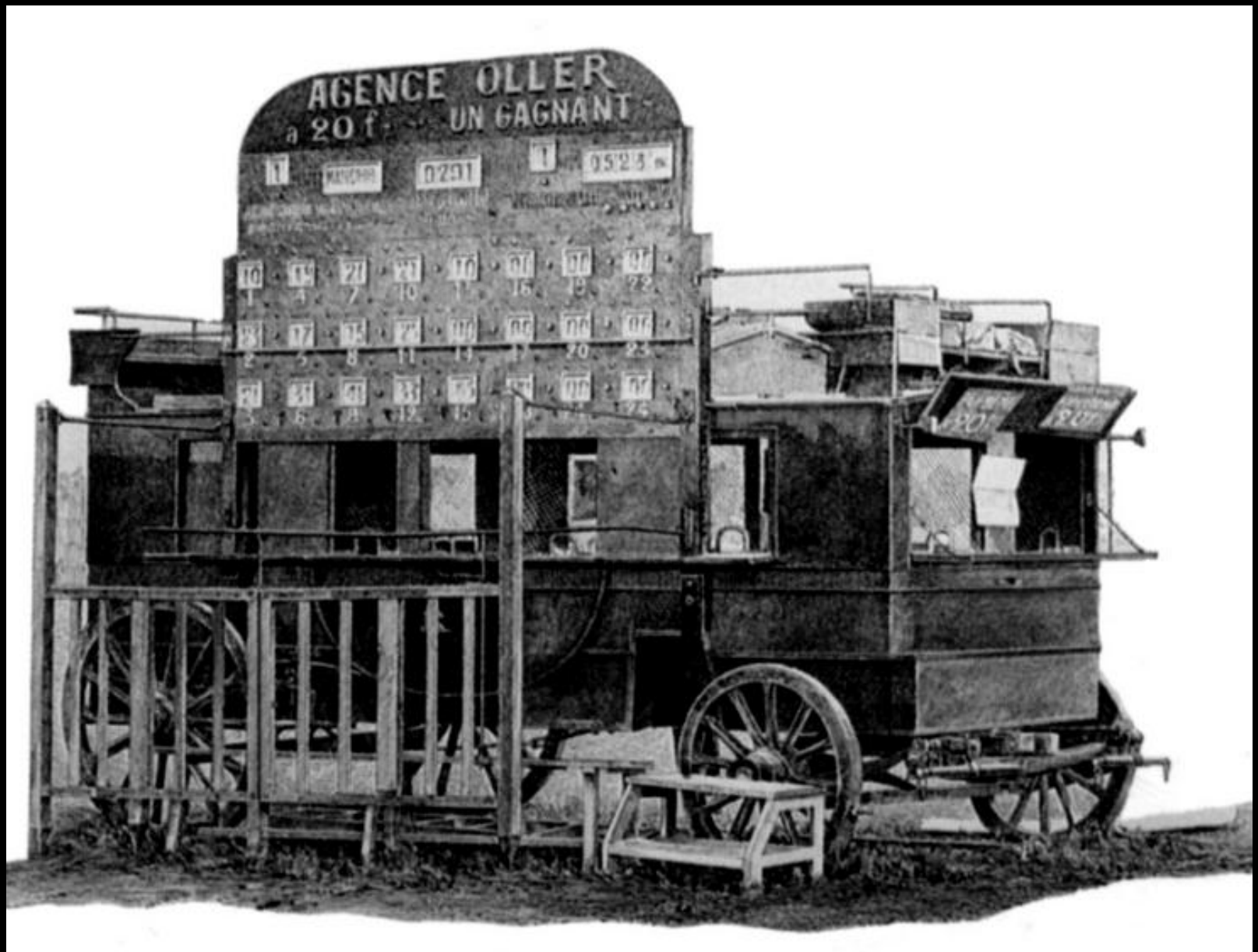
Cancel | Alter | Activate | Inactivate | Copy Order | Clearing | Order History



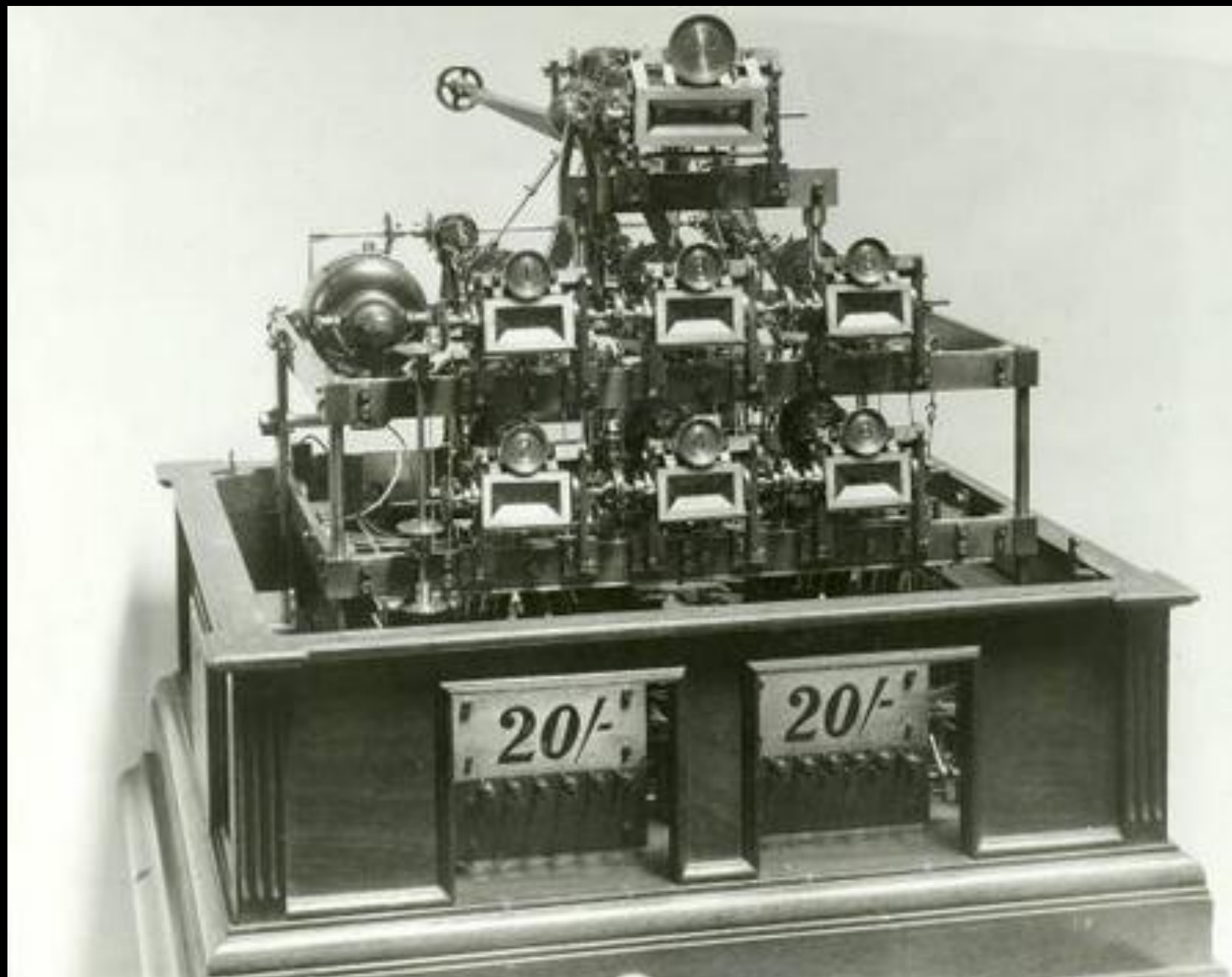








Oller Tote Wagon, 1860s



Totalizer



Location Longitude Downs ▾

Race 02 ▾

Single Horse

Quinella/Exacta

Exotics

Head to Head

Multi Race

Horse

Position

Any Horse

1 My Talisman

3 Seattle Slew

5 Count Fleet

7 Strawberry

8 Whirlaway

9 Silver

10 Secretariat

2 Wild Card

6 Three Fingers

4 Superstition

BLANK

CLEAR ALL

IN ORDER

ANY ORDER

Credit Balance \$4,999.00

Bet Type Trio

Horse 2 Wild Card  
6 Three Fingers  
4 Superstition

Limit

Odds 3695.65

Amount \$2.00

CANCEL

PLACE BET

Bet Amount

\$1

\$2

\$5

\$10

\$25

\$50

\$100

\$200

Other

Location Longitude Downs ▾

Race 02 ▾

Single Horse

Quinella/Exacta

Exotics

Head to Head

Multi Race

Race 1

Race 2

Race 3

Race 4

4 Gunpowder

NO BET

2 Lucky Charm

6 Mr. October

1 Citation

1 My Talisman

1 Ears Mossi

1 Buena Suerte

2 The Village Idiot

2 Wild Card

3 Oil Can Boyd

2 Fortune Cookie

3 Don

3 Seattle Slew

4 Little Miracle

3 Chanceux

5 Bucketfoot Al

4 Superstition

5 Roulette

4 Tomato Face

6 Rusty

5 Count Fleet

6 Fortuitous

5 Bonanza

7 Bambino

6 Three Fingers

7 Affirmed

7 Juan Gone

7 Strawberry

8 Assault

8 Mr. Ed

Credit Balance \$4,999.00

Bet Type Pick 3

Horse Race 1: 4  
Race 2: .  
Race 3: 2  
Race 4: 6

Limit

Odds 1807.88

Amount \$2.00

CANCEL

PLACE BET

Bet Amount

\$1

\$2

\$5

\$10

\$25

\$50

\$100

\$200

Other





場次 **5** 獨贏 WIN 位置 PLACE

RACE 1 11 \$ 41.50 \$ 17.50

覆磅完畢 2 9 \$ 71.50

WEIGHED IN 3 3 \$ 22.50

4 6

三重彩 TCE 11-9-3 \$ 4,995.00

單 T TRIO 3-9-11 \$ 931.00

連贏 QIN 位置 Q QPL

9-11 \$ 254.50 \$ 135.50

賽時 TIME 3-11 \$ 50.00

1:49.75 3-9 \$ 224.50

四重彩派彩 QTT DIVIDEND

場次 RACE **5**

**11 - 9 - 3 - 6**

**\$ 80,548.00**

每十元派 PER \$10 BET

場次 RA

9 553

10 172 4

11 374 4

12 147 5

13

14 8

c.com









**From Pong to the Pits to Single Pools:  
Convergence Lessons from  
the Securities Markets**

Thank you