The MarketGrader China A-Shares 200 Index:

An eGARP* Lens to the Mainland Equity Markets of the World's Largest Economy

* Emerging Growth at a Reasonable Price

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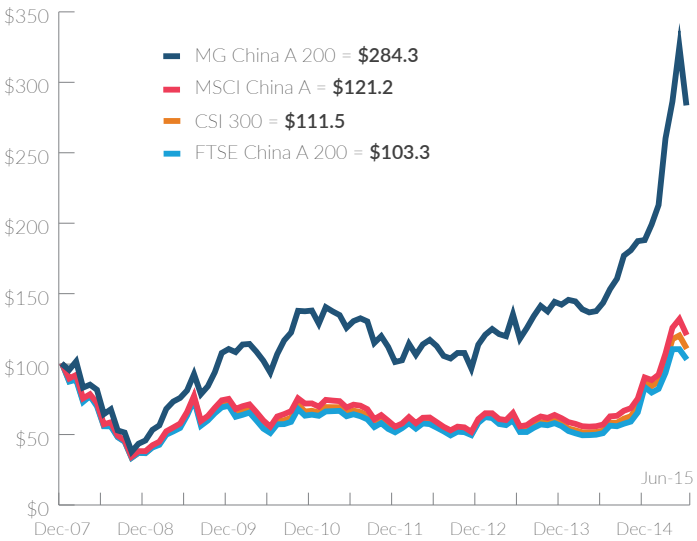
Introduction: The MarketGrader China A-Shares 200 Index

The MarketGrader China A-Shares 200 index measures the performance of a growth at a reasonable price (GARP) investment strategy for the Shanghai and Shenzhen exchanges within emerging China. MarketGrader uses proprietary fundamental analysis to identify the best 200 companies that exhibit growth attributes based on the optimal price to earnings (P/E) ratio to be a part of this index. The companies are reselected twice a year based on MarketGrader's proprietary rankings during which time the index is also rebalanced so that all components are equally weighted thus giving every company the same opportunity to contribute to the performance of the index.

Figure 1 below compares the cumulative total return performance of the MarketGrader China A-Shares 200 index (MG China A 200) and compares that with the performance of three peer indexes benchmarking the same equity universe. The peer group indexes are the MSCI China A Shares index, the FTSE China A Shares 200 index, and the CSI 300.

Figure 1. Cumulative Total Return Performance of the MarketGrader China A-Shares 200 Index in USD - December 31, 2007 through June 30, 2015



Source: www.MarketGrader.com. Benchmark total return data from FactSet.

It is obvious that the cumulative performance of the MG China A 200 is significantly different from the three peer group indexes. Over the 8.5 years, starting in January 2008 through June 2015, the MG China A 200 had a cumulative growth of 184.3% on a total return basis, while the three peer group indexes exhibited only marginal growth rates. Amongst the three comparison benchmarks, the MSCI China A shares exhibited the largest cumulative return of 21.2% - which is about an eighth that of the MG China A 200. The CSI 300 grew by 11.5% over the period. While the FTSE China A 200 stayed flat to slightly positive with a minuscule cumulative total return of 3.3% over the 8.5 year period.

To gain more insight into this enormous difference between the cumulative total return of the MG China A 200 and the peer group indexes, Figure 2 compares the performance – returns, volatilities and correlations – across the four indexes.

Figure 2. Performance of the MarketGrader China A-Shares 200 Index in USD Peer Group Comparison - January 2007 through June 2015

	MG China A 200	MSCI China A	FTSE China A 200	CSI 300
Returns				
Annualized (Ret)	15.1%	2.6%	0.5%	1.5%
Cumulative	184.3%	21.2%	3.8%	11.5%
Standard Deviation (SD)	31.6%	30.9%	31.7%	31.7%
Ret / SD (in basis points)	48	9	2	5
Correlations				
MG China A 200	1.00	0.90	0.83	0.86
MSCI China A		1.00	0.99	0.99
FTSE China A 200			1.00	1.00
CSI 300				1.00

Source: MarketGrader Research. Figure uses monthly total returns. See Figure A1 in the Appendix for the performance of the MarketGrader China A-Shares 200 Index in CNY. Only a small fraction of the return herein can be attributed to a favorable USD/CNY currency exchange rate.

As expected, with an annualized total return of 15.1% the MG China A 200 index has the greatest return over the 8.5-year (or 90-month) period ending June 2015. In fact, this is more than five times than the annualized return of the MSCI China A (2.6%); more that thirty times of the FTSE China A 200 (0.5%); and, more than ten times that of the CSI 300 (1.5%).

However, note that this additional return did not come at the expense of additional volatility as measured by the standard deviation. All of the four benchmarks had a relatively high volatility of around 30% – a figure considered "normal" for the Mainland China equity market. This means that the reward/risk ratio was significantly higher for the MG China A 200 than the other indexes. Indeed, whereas the MG China A 200 returned 48 basis points in return for a unit (100 basis points) of volatility, all of the other indexes returned less than 10 basis points – a reward/risk ratio that is dismal from an investment perspective!

Figure 2 also presents correlations of the MG China A 200 index with the three peer group indexes. It is interesting to note that the correlations suggest that the MG China A shares index has a significant correlation with the peer group indexes that are measuring the same equity universe (greater than 80% with all three comparison benchmarks). Which means that even though the MG China A 200 index moves directionally with the market and its peers, it captures much more on the up markets than it captures in the down markets relative to the peer indexes, thereby outperforming them on a return basis.

Given this significant difference in performance of the MG China A 200 index to the MSCI China A, FTSE China A 200 and the CSI 300 (all Mainland China indexes), the question becomes, what is the source of the outperformance?

The answer can be summarized as follows:

The component selection philosophy, based on eGARP, guarantees that only the best components, as described by their fundamentals, are selected to be a part of the index. This is the first key to the index's performance.

Second, the index uses a rules-based "active" methodology to harness return opportunities. The ability to harness return opportunities would not be possible using a simple buy-and-hold type of "passive" methodology. Though it should be clarified that a rules-based "active" methodology is not to be confused with active management. Active management essentially leaves it to the discretion of the manager to buy and sell securities within a portfolio. In pure active management many of the portfolio management decisions can be subjective. A rules-based "active" approach, on the other hand, is transparent and objective.

These two features described above are the main determinants of the performance of the MG China A 200 index. The next two sections provide a glimpse into how these two features of the index have been working historically to generate the outstanding performance presented in Figures 1 and 2.

Component Selection is the Key to Outperformance

As mentioned at the start, MarketGrader uses proprietary fundamental analysis to identify the best 200 companies that exhibit growth attributes based on the optimal price to earnings (P/E) ratio to be a part of the MG China A 200 index. This stock selection approach is consistent with a GARP strategy and because these companies are emerging companies, can be referred to as an emerging GARP, or an eGARP strategy.

To ensure that the best eGARP companies are included in the index and those that don't satisfy the eGARP attributes—because their relative valuations have far exceeded their earnings growth expectations—are removed from the index, company selection is performed twice a year (on the 3rd Friday of March and September). This is one of the keys to the outperformance of the MG China A Shares 200 index.

To illustrate how the index includes the best eGARP companies, Figure 3 presents the component make-up of

the index by the two mainland exchanges (Shanghai and Shenzhen) where the companies are listed and traded. The make-up is presented for each reconstitution date since the index was first constituted on its base date of December 31, 2007.

Figure 3. The MarketGrader China A-Shares 200 Index – Components Are the Best eGARP Companies Irrespective of Exchange

Number of Companies by Exchange			
Reconstitution Date	Shanghai	Shenzhen	Total
Dec – 2007	85	115	200
Mar – 2008	85	115	200
Sep – 2008	84	116	200
Mar – 2009	86	114	200
Sep – 2009	93	107	200
Mar – 2010	97	103	200
Sep – 2010	101	99	200
Mar – 2011	108	92	200
Sep – 2011	96	104	200
Mar – 2012	107	93	200
Sep – 2012	118	82	200
Mar – 2013	129	71	200
Sep – 2013	127	73	200
Mar – 2014	131	69	200
Sep – 2014	130	70	200
Mar – 2015	131	69	200
Average	108	92	-
Minimum	84	69	-
Maximum	131	116	-

Source: MarketGrader Research. See Figure A2 in the Appendix for the sector make-up of the index across time. This is insightful since the two exchanges have different sector representations.

Familiarity with the relative performance of the two China mainland exchanges helps immensely with gaining insight into this figure. Over the 8.5 years time period presented (starting in January, 2008 through June, 2015), both the exchanges first declined (the first five years or so was a bear market) and then experienced enormous price increases (the last three years or so was a bull market). However, during the bear market, Shenzhen declined by about half as much as Shanghai in relative terms. Then during the bull market, while the prices of the Shanghai composite doubled, the prices of the Shenzhen composite more than tripled. Overall, over this time period, the Shenzhen outperformed the Shanghai exchange.[1]

So in relative terms, over the last three years or so, the P/E ratios of companies in the Shenzhen exchange have been climbing rapidly and have far been exceeding the optimal P/E ratios than for the companies trading on the Shanghai exchange. This means that in comparison to the companies trading on the Shenzhen exchange, companies trading on the Shanghai exchange are more likely to satisfy the eGARP characteristic - the key attribute that the MG China A 200 index uses to select components.

Now notice how the composition of the MG China A 200 index has been changing since its first constitution on December 31, 2007. At that point in time, the index was made up of 85 companies from the Shanghai exchange and 115 companies from the Shenzhen exchange. Since the index is equally weighted across all components at reconstitution, this means that the index had a 42.5% weight in Shanghai-exchange companies and 57.5% weight in Shenzhen-exchange companies. Now fast-forward to the most recent March 2015 reconstitution. At this time, the index is comprised of 131 companies from the Shanghai exchange and only 69 companies from the relatively more expensive Shenzhen exchange. Which means that the index is now weighted 65.5% in Shanghai-exchange companies and only 34.5% weighted in Shenzhen-exchange companies – an amazing shift in weight over the 8.5-year period. In fact, the MG China A 200 index has been holding less than 100 components (less than 50% weight at reconstitution) from the Shenzhen exchange since the March 2012 reconstitution, which was about the time that the prices of

1. See, "The Shanghai & Shenzhen Exchanges: Performance by Size and MarketGrader Ratings," a white paper published by MarketGrader Capital, July 2015, for a more in-depth analysis of the absolute and relative performance of the two exchanges.

the exchange started rising significantly.[2]

Figure 3 clearly illustrates that as the relative eGARP characteristics of companies on the two exchanges have been changing with time, the MG China A 200 index has also been transforming to take advantage of the under/over pricing of companies based on company fundamentals. This is ultimately reflected in the composition of the index and finally in its performance.

A Rules-Based "Active" Index Methodology Ensures Best eGARP Components

Given the nature of emerging equity markets, it is to be expected that Chinese domiciled companies listed and trading on the Chinese exchanges will be evolving in terms of their company fundamentals more rapidly than companies in developed economies. Active managers have traditionally used this characteristic, together with the fact that information flows are much slower in such economies to monetize the opportunities that arise due to the temporary mispricing of companies whose underlying fundamentals are not reflected in their actual valuations in the marketplace. But, whereas an active manager can use personal discretion and subjective judgment to make buy and sell decisions, a rule-based "active" approach is actually governed by a set of pre-defined rules specified in the index methodology that is applied in a transparent and objective fashion to add and remove components form the index. However, the goal of both the approaches is the same, namely, to generate performance over and above the market performance.

Figure 4 below presents the turnover in the components of the MG China A 200 at each of the reconstitution dates since the index was first constituted on December 31, 2007.[3]

Figure 4. The MarketGrader China A-Shares 200 Index – Turnover in Components Ensures Best eGARP Companies

	Number of Companies		
Reconstitution Date	Carried Forward	Added	Total
Dec – 2007	200	-	200
Mar – 2008	189	11	200
Sep – 2008	119	81	200
Mar – 2009	95	105	200
Sep – 2009	123	77	200
Mar – 2010	99	101	200
Sep – 2010	108	92	200
Mar – 2011	105	95	200
Sep – 2011	118	82	200
Mar – 2012	102	98	200
Sep – 2012	129	71	200
Mar – 2013	102	98	200
Sep – 2013	123	77	200
Mar – 2014	124	76	200
Sep – 2014	103	97	200
Mar – 2015	123	77	200
Average	117	83	-
Minimum	95	11	-
Maximum	189	105	-

Source: MarketGrader Research. Please contact www.MarketGrader.com for turnover by mainland exchange, i.e., turnover statistics for the counts presented in Figure 3. Also, see Figure A3 in the Appendix for the time duration the components are members in the index by reconstitution date.

Note that except for the first reconstitution in March 2008 (keeping in mind that less than three months had passed since the index constitution so probably not much had changed in terms of the fundamentals for the components), the component turnover rates are relatively high. Over the 15 reconstitutions that have been implemented since its inception, the average number of companies that have been deleted/added to the MG China A 200 is 83 (with the

2. As of June 1, 2015, the CSI 300 index was also underweighted components of the Shenzhen exchange. In terms of component counts, it was made up of 180 (60%) components from the Shanghai exchange and 120 (40%) components from the Shenzhen exchange. In terms of weights, the components from the Shanghai exchange contributed a total weight of around 70% to the index with the remaining weight (about 30%) being contributed by the components of the Shenzhen exchange. Source: www.csindex.com.cn.

3. Portfolio turnover is one measure to capture to the degree of "active" management. However, what is presented here is turnover in components, which can be quite different from total turnover.

largest number of addition/deletions being in the March 2009 reconstitution, right after the collapse in 2008). Again keeping in mind that the companies are equally weighted at the reconstitution, this implies a turnover rate of at least 41.5% of the index for every six months.[4] On an annual basis this would imply a turnover of around 83% meaning that the index was rotating all of its 200 components approximately every 15 months. This turnover rate though not as high as an actively managed portfolio, is not associated with a "passive" portfolio, which generally has annual turnover rates of 20% or less.[5]

This distinction is important since it is a critical design feature of the MG China A 200 index. This rules-based "active" approach allows the index to continue trading on the most recent company fundamentals information that is becoming available by deleting and adding components, very much like active managers, but using a transparent and objective methodology.

Summary & Conclusions

- The MarketGrader China A-Shares 200 index measures the performance of a growth at a reasonable price (GARP) investment strategy for the Shanghai and Shenzhen exchanges within emerging China. MarketGrader uses proprietary fundamental analysis to identify the best 200 companies that exhibit growth attributes based on the optimal price to earnings (P/E) ratio to be a part of MarketGrader China A-Shares 200 index.

- The companies for the MarketGrader China A-Shares 200 index are reselected twice a year based on MarketGrader's proprietary rankings during which time the index is also rebalanced so that all components are equally weighted thus giving every company the same opportunity to contribute to the performance of the index.

- The MarketGrader China A-Shares 200 index has significantly outperformed its peer group (as defined by the MSCI China A index, FTSE China A 200 index and the CSI 300 index) in terms of absolute and risk-adjusted performance, and yet is highly correlated to them.

- The component selection philosophy for the MarketGrader China A-Shares 200 index is based on eGARP. This guarantees only the best components, as described by their fundamentals, are selected to be a part of the index. This is the first key to the index's outperformance.

- The second key to the outperformance of the MarketGrader China A-Shares 200 index is that the index uses a rules-based "active" methodology to harness return opportunities. A rules-based "active" approach, is transparent, objective and low-cost.

- Finally, this index approach as implemented by the MarketGrader China A-Shares 200 index can be very appealing to investors since it gives them an opportunity to participate in the upside of performance but with passive, index-like fees.

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4. This is an approximation since the actual turnover would include the "buying" and "selling" that has to be performed to bring the companies that are not removed from the index to their rebalanced weights. Therefore, the actual turnover would in practice be more.

5. Active portfolios in the emerging equity asset class have significant turnover rates. It would be hard to find an actively managed emerging equity portfolio, which has generated a significant outperformance relative to the broad market, with an annual turnover of less than 100%.

Appendix

Figure A1. Performance of the MarketGrader China A-Shares 200 Index in USD January 2007 through June 2015

	MG China A 200	MSCI China A	FTSE China A 200	CSI 300
Returns				
Annualized (Ret)	12.7%	0.4%	-1.7%	-0.7%
Cumulative	142.4%	2.9%	-11.9%	-5.3%
Standard Deviation (SD)	31.7%	31.2%	32.0%	32.0%
Ret / SD (basis points)	40	1	-5	-2
Correlations				
MG China A 200	1.00	0.90	0.83	0.86
MSCI China A		1.00	0.99	0.99
FTSE China A 200			1.00	1.00
CSI 300				1.00

Source: MarketGrader Research. Figure uses monthly total returns. See Figure 2 for the performance of the MarketGrader China A-Shares 200 Index in USD.

Figure A2. The MarketGrader China A-Shares 200 Index – Components by Sector at Reconstitutions

Components Counts at Reconstitution																
Sector	Dec-07	Mar-08	Sep-08	Mar-09	Sep-09	Mar-10	Sep-10	Mar-11	Sep-11	Mar-12	Sep-12	Mar-13	Sep-13	Mar-14	Sep-14	Mar-15
Consumer Discretionary	31	33	24	26	30	37	32	40	27	33	35	40	28	31	23	29
Consumer Staples	12	11	13	15	17	14	9	11	12	17	20	19	16	16	13	12
Energy	9	9	17	16	15	13	18	9	12	12	7	6	3	3	3	4
Finacials	15	15	17	14	15	18	12	23	27	23	21	26	29	19	20	17
Healthcare	28	28	34	30	39	27	29	25	20	25	37	26	28	28	26	30
Industrials	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Materials	40	40	40	32	22	23	30	24	38	29	14	18	19	21	23	18
Technology	14	14	9	19	17	23	27	23	19	18	22	22	26	30	36	39
Telecommunications	2	2	2	3	1	1	1	1	0	1	1	1	2	2	2	1
Utilites	9	8	4	5	4	3	2	4	4	1	2	2	9	10	12	7
Miscellaneous	0	0	0	0	0	1	0	0	1	1	1	0	0	0	2	3
Total	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**

Source: MarketGrader Research.

Figure A3. The MarketGrader China A -Shares 200 Index – Number of Components by Reconstitution Date

Number of Components by Reconstitution Cohort																	
Reconstitution Date	Dec-07	Mar-08	Sep-08	Mar-09	Sep-09	Mar-10	Sep-10	Mar-11	Sep-11	Mar-12	Sep-12	Mar-13	Sep-13	Mar-14	Sep-14	Mar-15	Total
Dec-07	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
Mar-08	189	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
Sep-08	118	1	81	-	-	-	-	-	-	-	-	-	-	-	-	-	200
Mar-09	62	0	33	105	-	-	-	-	-	-	-	-	-	-	-	-	200
Sep-09	43	0	20	60	77	-	-	-	-	-	-	-	-	-	-	-	200
Mar-10	24	0	11	29	35	101	-	-	-	-	-	-	-	-	-	-	200
Sep-10	20	0	9	20	13	46	92	-	-	-	-	-	-	-	-	-	200
Mar-11	11	0	6	17	6	22	43	95	-	-	-	-	-	-	-	-	200
Sep-11	9	0	6	12	3	14	26	48	82	-	-	-	-	-	-	-	200
Mar-12	9	0	4	8	2	10	18	16	35	98	-	-	-	-	-	-	200
Sep-12	7	0	1	8	1	9	14	9	18	62	71	-	-	-	-	-	200
Mar-13	7	0	1	7	1	6	8	6	10	26	30	98	-	-	-	-	200
Sep-13	6	0	0	5	0	5	6	5	8	19	20	49	77	-	-	-	200
Mar-14	6	0	0	4	0	4	4	4	5	14	13	32	38	76	-	-	200
Sep-14	3	0	0	2	0	3	3	4	4	6	7	17	22	32	97	-	200
Mar-15	3	0	0	1	0	3	3	3	2	5	7	14	15	18	49	77	200

Source: MarketGrader Research.

Note: The three components that have been part of the index since its first constitution back in December 31, 2007, are: Gree Electric Appliances Inc., Kweichow Moutai Company Ltd., and Guizhou Yibai Pharmaceutical Company. The fact sheet for the MG China A 200 index can be found here.

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