

## SETTING TRUE PRICING AND VALUE

By Daryl Guppy and Chen Jing ©2008

What is more important in determining market behavior and market pricing – fair value based on fundamentals, or the market value created by psychological trading behavior? The classic economic and market models rest on fair value and describe pricing activity in the market as subject to ‘irrational exuberance.’ A study of the China and Hong Kong markets with a parallel listing of China based companies suggest that psychological trading behavior has a much greater role to play in correct market pricing. It suggests that the market price is the rational and valid price and acknowledges an emotional component in pricing. This confirms the role technical analysis has in understanding market behavior and making sound trading and investment decisions.

The variety and difference in trend behavior in these parallel listed stocks challenges many foundation assumptions about the relationship between price, value, fair pricing and the extent of the role of emotional behavior in setting enduring price relationships.

Many traders believe financial markets are a mental fabrication where the price of a traded stock is driven primarily by the emotions and behavior of participants. These traders make profits by understanding the psychology of the market and using charting and technical analysis methods to identify points of trend change or trend continuation.

Many investors believe the market is about fundamental value based on the real business and performance of the company. When the traded price moves above or below this ‘true’ value they often lament the distortions introduced by market emotions and overreactions. They view the market as rational or irrational, forgetting that even the most excited person believes he is making a rational decision to buy. Their investment technique often rests on locating companies trading below their true value on the assumption that the market price will eventually lift to match and reflect the true value.

Each of these belief systems has developed successful trading and investing strategies and mythology. Traders who use technical analysis and charting methods have become accustomed to sustained criticism from the fundamentalists. It is difficult to respond to some of these criticisms because it is difficult to isolate the psychological component in price discovery, or to show how pricing is largely driven by behavioral and emotional factors.

Our involvement with China markets has provided a unique opportunity to explore these differences in a practical way rather than within the confines of economic or theoretical modeling. For several years we have produced a weekly trade advisory for China mainland traders covering around 40 stocks in each issue. Our focus is on trading methods so we are familiar with the behavior of China listed stocks. We also trade Hong Kong and other markets. The differences in the trend behavior of parallel listed China stocks is startling.

We may have suspected that psychology plays a greater role in pricing than fundamental analysis suggest, but this unique parallel market provides strong evidence

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of the impact. Rather than suggesting that emotion somehow distorts the ‘truth’ of market fundamentals, our experience suggests that market pricing is dominated by emotional reactions. Trading success rests upon recognizing the patterns of emotional behavior and trend behavior. Except in a very broad sense, market pricing does not rest on fundamentals.

The essential assumption in this comparative analysis is that these parallel listed stocks are essentially the same on a fundamental basis. The differences in trend behavior are a result of different perceptions of risk. In simplistic terms, the risk profile adopted by Chinese investors and traders in relation to China Merchant Bank is different from the risk profile perspective adopted by traders and investors outside of China. Normally these differences in risk perception are aggregated in single market. Those who perceive limited risk are willing to pay a higher price. Those who perceive a greater level of risk wait for a lower entry price. The market exchange mechanism give a traded price that captures the full parameters of these risk perceptions. In the parallel listed market, we have two quite distinct groups so we can see more clearly the impact of market psychology and market behavior. We have a greater opportunity to separate the impact of the fundamentals from the impact of psychological behavior and its relationship with price discovery.

The difference in trend and price behavior are not the result of differences in fundamentals. They are, to a significant extent, the result of different perceptions of risk. We found these differences are the most significant component of pricing, price behavior and trend behavior in traded stocks. The market is not primarily a mechanism for matching fundamentals with price. It is a mechanism that reflects the level of emotional behavior in response to different perceptions of risk.

The observations confirm the validity of the market approach based on understanding the emotions and the behavior of participants. This does not invalidate investment methods based on fundamental analysis, but it does confirm that market pricing is primarily driven by factors other than fundamentals. It confirms that analysis tools based on the idea that price is a measure of the psychology of the market are more compatible with market behavior than fundamental approaches.

The financial market rarely provides a real-time laboratory where competing approaches can be compared. Trading in several China based stocks are the exception. The mainland China market is a closed market. It is essentially unavailable for trading by foreigners. We call this the China market. There are a small group of Chinese companies which are parallel listed and traded both in mainland China and outside of China. This is an international market. The companies traded across these parallel markets are unique. The companies are China companies, sometimes with international operations. Trading and investing is in the mother company, irrespective of whether the trade takes place in the China or the international market.

The Jiangxi Copper is our starting example and it illustrates all the conditions of this real-time laboratory investigation. Jiangxi Copper is listed in Shanghai and also parallel listed in Hong Kong. The fundamentals of the company are the same inside China as they are outside of China. The company remains the same, but it is listed in two separate locations.

Jiangxi Copper shares are not fungible. Jiangxi Copper shares purchased in Hong Kong cannot be swapped or exchanged for Jiangxi Copper shares purchased in Shanghai. This means there is no arbitrage mechanism available to bring Jiangxi Copper prices in Shanghai into agreement with Jiangxi Copper prices in Hong Kong.

These are two completely separate, parallel and closed markets. Foreigners are unable to trade Jiangxi Copper shares in Shanghai. Mainland Chinese are unable to trade

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Jiangxi Copper shares in Hong Kong. There is a China market and an international market.

The essential feature of this real-time laboratory is the existence of two independent and quarantined markets – the China market and an international market. If market behavior and pricing is closely related to fundamental analysis then we would expect to see a similarity in behavior in the price activity of 600362 Jiangxi Copper in Shanghai, and 0358 Jiangxi Copper in Hong Kong. Because the shares are not fungible, we do expect to see a price difference because these differences cannot be arbitrated.

When we compare Jiangxi Copper China with Jiangxi Copper Hong Kong we see a substantial difference in the behavior of price. There are substantial differences in the behavioral characteristics of trends and entirely different trading opportunities. We use the same period of time, and compare the two charts independently from a technical perspective. We use the same analysis methods and examine the chart from three perspectives.

The first perspective is Guppy Multiple Moving Average (GMMA) trend analysis. The GMMA indicator consists of two groups of moving averages. The indicator captures the volatility clustering in the market. The short term group of averages provides an indication of the behavior of short term traders. Compression indicates agreement on price and value and often precedes a trend break. Expansion in the group indicates a return of price to the longer term value as traders take short term profits. This pattern of compression and expansion is fractally repeated in the behavior of the long term group of averages.

The long term group provides an indication of the behavior of investors. They are generally slower to react to trend changes, but their support for the trend is often more reliable. Wide separation indicates strong trend support. The compression and expansion activity is a fractal repetition of the behavior seen in the short term group.

The relationships between the two groups of averages yield information about the nature of the trend and the character of the trend. This allows for better decisions in regard to the most appropriate trading or investment approaches. The detailed application of this indicator is covered in TREND TRADING by Daryl Guppy. For the analysis in these notes, our focus is on the information given about trend behavior.

The second perspective is trend line analysis. We assess the compatibility of price behavior with trend line analysis.

The third perspective is chart pattern analysis. Chart patterns capture the short term psychological behavior of market participants. Patterns duplicated on both the China and international listings would confirm the similarity of behavior in these parallel listings.

If fundamental analysis approaches are correct then we would expect to see close similarities and high correlation between the China listed stock and the internationally listed stock. If trading approaches are correct, we would expect to see some significant differences in trend behavior and in the nature of trading opportunities. We start with a detailed analysis of Jiangxi Copper, listed both in Shanghai and Hong Kong.

## **TREND ANALYSIS- JIANGXI COPPER**

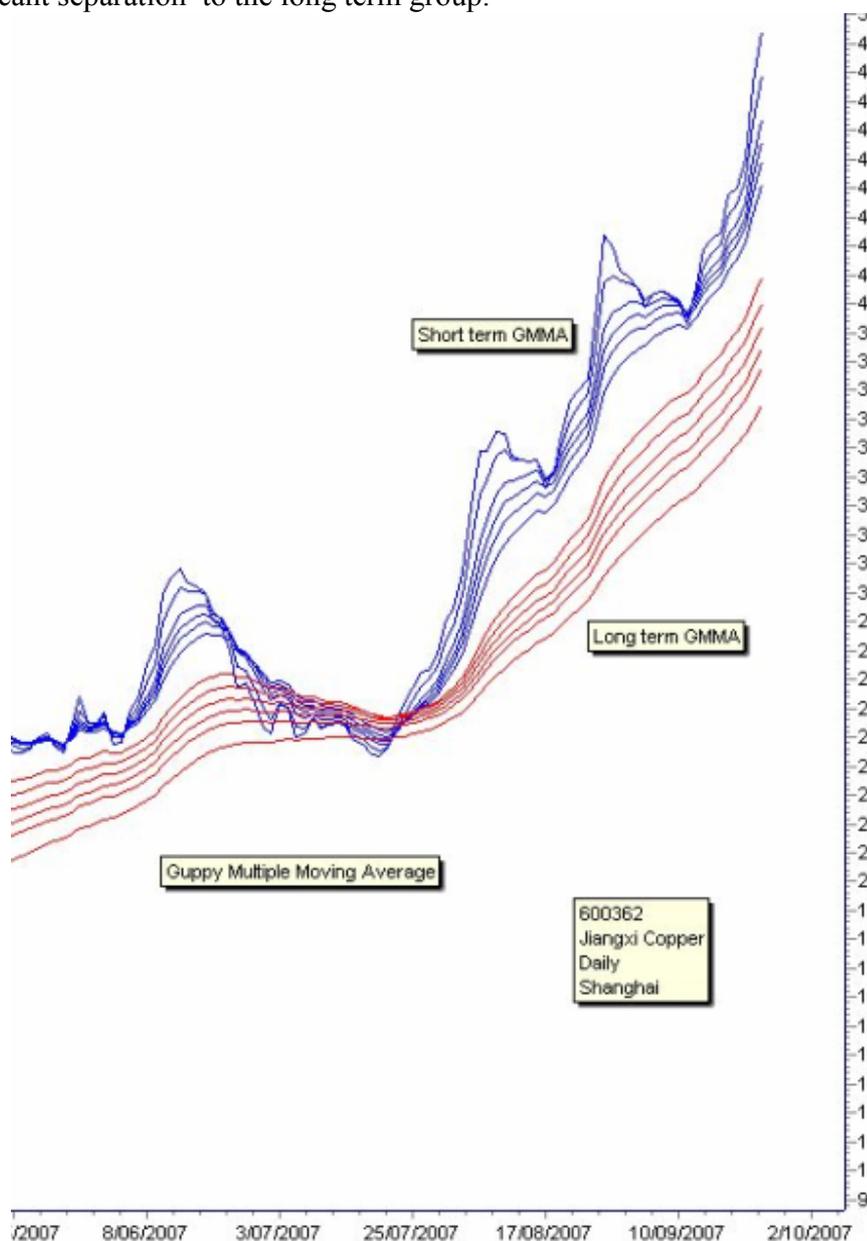
The key feature is the strength and stability of the trend and this is shown by GMMA analysis. The long term group of GMMA averages are well separated from 2007 February through to 2007 June. The Chinese market sell-off which developed at the end of 2007 February is a small dip in the short term trend and has essentially no impact on the long term trend. The long term group does not compress. This suggests investors are

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coming into the market as buyers when the price drops. They see this as temporary price weakness rather than trend weakness.

The trend develops weakness in July. The long term group compresses and turns downwards. The short term group of averages confirm with trend weakness with a significant separation to the long term group.



The rebound that developed from the end of July through September is strong and a well supported trend. The long term group of GMMA averages separates quickly and confirms trend strength.

The key characteristics of this trend are its solidarity and strength, and the relatively low level of trading activity. The short term group of averages shows a limited degree of compression and expansion. Traders buy and hold onto the stock for extended periods. The exception is the primary sell off in June. This reaches its lowest on July 19.

In this comparative analysis we are not concerned with the potential reasons for the June sell off and the July rebound. However, we would expect to see this pattern of

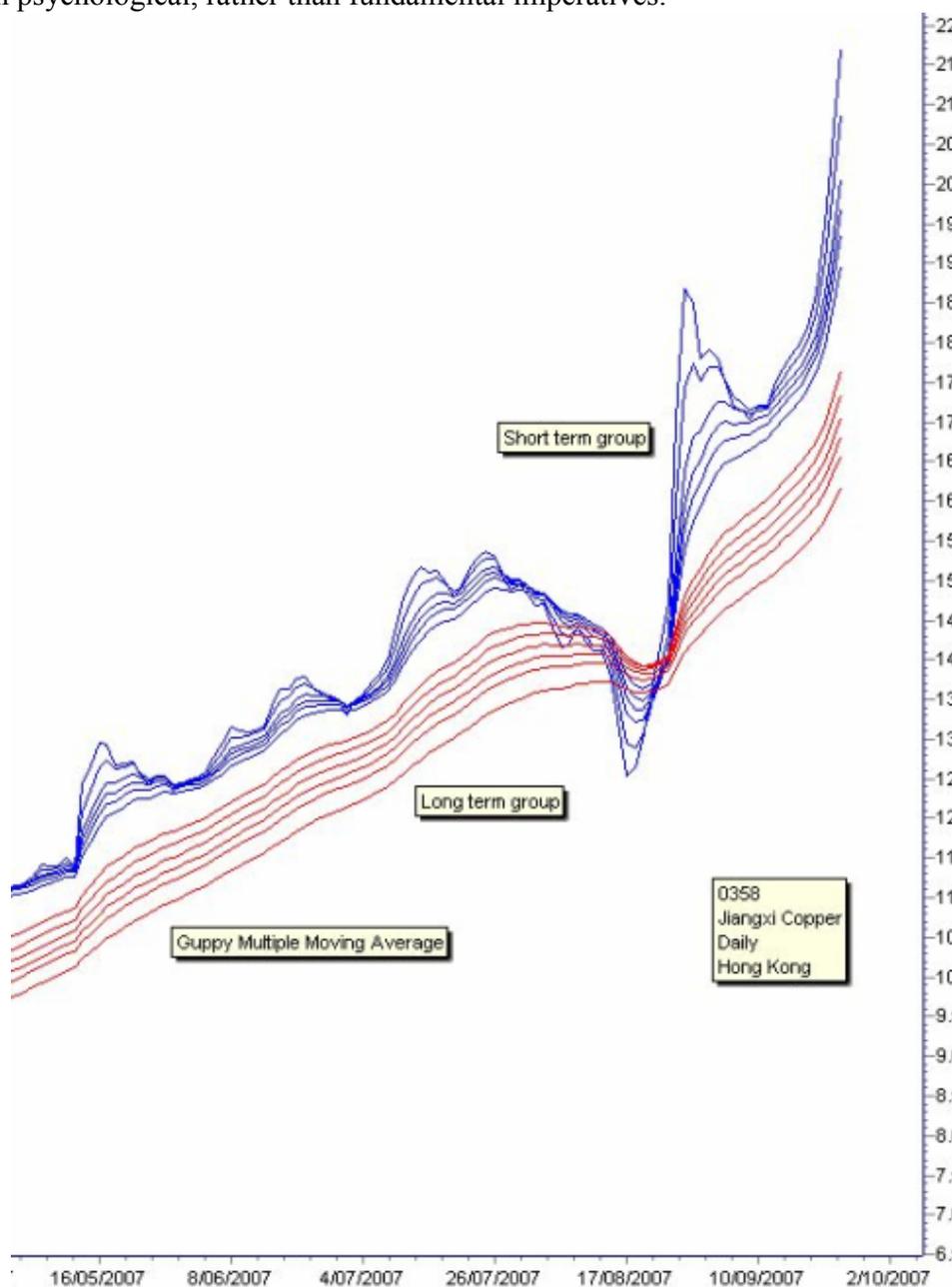
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behavior repeated in the Hong Kong listed Jiangxi Copper chart. Instead we see a very different behavior.

The sell off in Hong Kong is sharper and more pronounced. The short term group dips well below the long term group before developing a rebound rally. The China listing shows trend weakness while the Hong Kong listing indicates a potential trend change.

Most importantly the period of maximum weakness in Hong Kong occurs on August 17. This is nearly a month after the maximum weakness in Shanghai. Clearly the Jiangxi Copper Hong Kong listing is reacting to different emotional events to the Shanghai listing. This is the same company, exposed to the same movements in commodity prices, but traded in two distinct parallel markets. Each market is reacting to its own psychological, rather than fundamental imperatives.



The Hong Kong Jiangxi Copper listing shows a strong and stable trend but with a slightly higher level of trading activity. The short term group of averages shows a greater degree of compression and expansion.

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When we compare the period from late 2006 and into February 2007 we observe two important differences. The first is the general downtrend and recovery towards the end of 2006 in the Hong Kong listing. The Shanghai listing shows a steady rise starting in 2006 November. The difference in the nature and character of the trends is highlighted at the end of February. This is the markets sell-off after the end of Chinese New Year. It is widely credited with causing the sell off in the DOW in 2007 February.

The Hong Kong charts shows a sudden and substantial dip at the end of February. The short term group of averages dips into the long term group. The Shanghai chart shows a small dip. The short term GMMA does not touch the long term group. The trend is not threatened.

Our purpose is not to explain the reasons for the differences at these two key retracement points. What is more important is to note that the behavior and character of the trend is significantly different even though the stock being traded is the same company. The difference in trending behavior reflect differences in crowd psychology rather than differences in the fundamentals.

### **PATTERN TRADING – JIANGXI COPPER**

Trend and trend behavior provide an analysis of longer term market behavior. Chart patterns are a reflection of trading psychology and provide a range of high probability outcomes. The patterns develop in response to traders perceptions of opportunity. Although the link with fundamental developments may be more tenuous, we would still expect to see a similar type of pattern development in this parallel listed stock. A range of different patterns confirms the importance of psychology in determining market pricing.

The Shanghai listed Jiangxi Copper shows a complex level of trend behavior and pattern development. (note all China stocks are shown with a China chart display. Red=up.) Trend line B defines the trend break starting 2007 March. This support line is broken in 2007 May, and it provides a resistance point for the rally peak in June 2007.

Trend line A is an historical convenience. The two starting points in 2007 January and February are not confirmed until 2007 July. This trend line is easy to plot retrospectively, but in real time it is more difficult.

Trend line C is a much more definite trend line. Projected from the start point in 2007 July it can be used to manage a trend entry in August and early September. However, it is fair to conclude that trend line analysis is not the most effective way to define the trending behavior of Shanghai listed Jiangxi Copper. Shorter term trading opportunities are not well defined with this method.



The chart does contain two additional chart pattern features. The first is the flag pattern in 2007 August. The flagpole measurement starts with the larger than usual range days starting July 30. The 6 day rise creates a flagpole. The subsequent bullish flag develops over 8 days. This is a classic bullish flag and a classic high probability breakout. Prices move quickly to the target at 45.00 before retreating.

Many traders suggest that flag pattern captures the rumor of a news event. This is followed by disappointment as the failure to confirm the news. This sell off creates the

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flag. Then the news is finally confirmed, the price breakout out above the upper edge of the flag. This is pattern we associate with informed trading. Some market participants are more informed than others, and this creates the flag pole.

The Shanghai chart also shows a second pattern. This is a distinctive China pattern we call a China cup. This is a reversal pattern. It occurs after a sharp sell off after a fast rising trend. The sell off generally creates a rounding bottom over a 5 to 15 day period. The cup does not usually develop a handle. The usual target measurements methods are not applied. This is a trend continuation pattern.

The China listed Jiangxi Copper shows a variety of chart patterns and it is, to a significant extent, incompatible with trend line analysis. The Hong Kong listing has quite different characteristics. (note all Hong Kong stocks are shown with a Western chart display. Red=down.)

The pattern of trend behavior is very different. The primary downtrend shown with trend line A was decisively broken in January 2007. The new uptrend line B was more strongly confirmed by the retreat and rally in March and then again in April. This was only possible to plot with certainty in April because the Chinese New year dip carried price activity below the trend line. However, once plotted, trend line B provides a reliable rebound support level as the long term rising trend developed. This is a clear trend during the period when the China listed stock experienced trading activity that makes trend line definition unreliable.

The close below the trend line B in August was a clear end of trend signal.



The flag pattern development in August is not reflected in the Hong Kong chart. The same August period in Hong Kong sees a dramatic and rapid retreat in prices followed by a rapid rebound. In this period the difference in the behavior of these markets is extreme.

In China, August includes a sharp flagpole rally, a flag pattern and a flag pattern breakout. In August in Hong Kong, we see the end of a long term trend, a volatile price dip followed by a very sharp rise.

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The sharp rise is followed by an apparently similar China cup pattern, but there are important differences. The late August rally carries prices to a peak at 23.50 which is unsustainable. It is followed by a close at 20.35. This triggers a substantial fall and a sharp rise. The pattern of the price rise on the right side of this cup is exceptionally fast. This is a pure momentum trend. In contrast, the same period in the China listing shows less momentum, and some consolidation within the rise. The two patterns look similar, but they require different trading methods to protect profits.

## CONCLUSIONS

China listed Jiangxi Copper *could* be an entirely different company from the Hong Kong listed Jiangxi Copper. Despite the common fundamental performance base, there is very little similarity in these two charts.

The most significant observation is that the nature and character of the trend is very different between the Shanghai listed Jiangxi Copper and the Hong Kong listed Jiangxi Copper. The underlying company, Jiangxi Copper, is unchanged and fundamental analysis would suggest that the core trends should be essentially similar after discounting the impact of currency fluctuations. This will effect some pricing, but it should not effect the underlying trend behavior.

The differences in GMMA analysis suggest a significant difference in the way that traders view the stock. In China they see a stable trend of shorter duration. Trend weakness develops, but is well supported by investors so it has a low probability of developing into a downtrend. The trend rebound develops in July and creates a strong stable trend.

In Hong Kong the trend has a long duration, but it has a higher degree of weakness. There is a higher level of trading activity. The sell off in August is more severe. The rebound has a higher degree of momentum characteristics.

The behavior of long term investors is inferred by the long term GMMA group of averages. These behavior patterns were very different. In the China market they showed consistent strength and good support for trend weakness. In the international market the support was less well developed. Additionally, the trend weakness developed more quickly and at a different date.

When the nature and character of the trend changes, then the nature of trading opportunities change. In the Jiangxi Copper China chart we see two distinctive patterns. In the Jiangxi Copper Hong Kong chart we locate one tradable pattern. In contrast, there was a better definition of the trend using a trend line. Chart patterns are significant because they encapsulate the short term psychological behavior of market participants. This behavior may be triggered by news driven events, or rumors. They may be driven by changes in fundamentals, based on company reports or developments. As Jiangxi Copper is a single parallel listed company we can reasonably expect that this fundamental information will become available to all market participants at around the same time. We could also expect that the market reaction to the same event would be similar in both the China and the international market. This would be true if the basics of fundamental analysis hold true.

Instead we find that patterns in Jiangxi Copper China and Jiangxi Copper Hong Kong are not correlated in time, diversity, or duration. Jiangxi Copper China has different chart patterns from Jiangxi Copper Hong Kong. They appear at different dates, and persist for different lengths of time.

These differences confirm the development of price behavior is primarily a result of psychological factors rather than fundamental factors. The aggregated activity of China traders shows a different behavioral pattern to the aggregated activity of traders in

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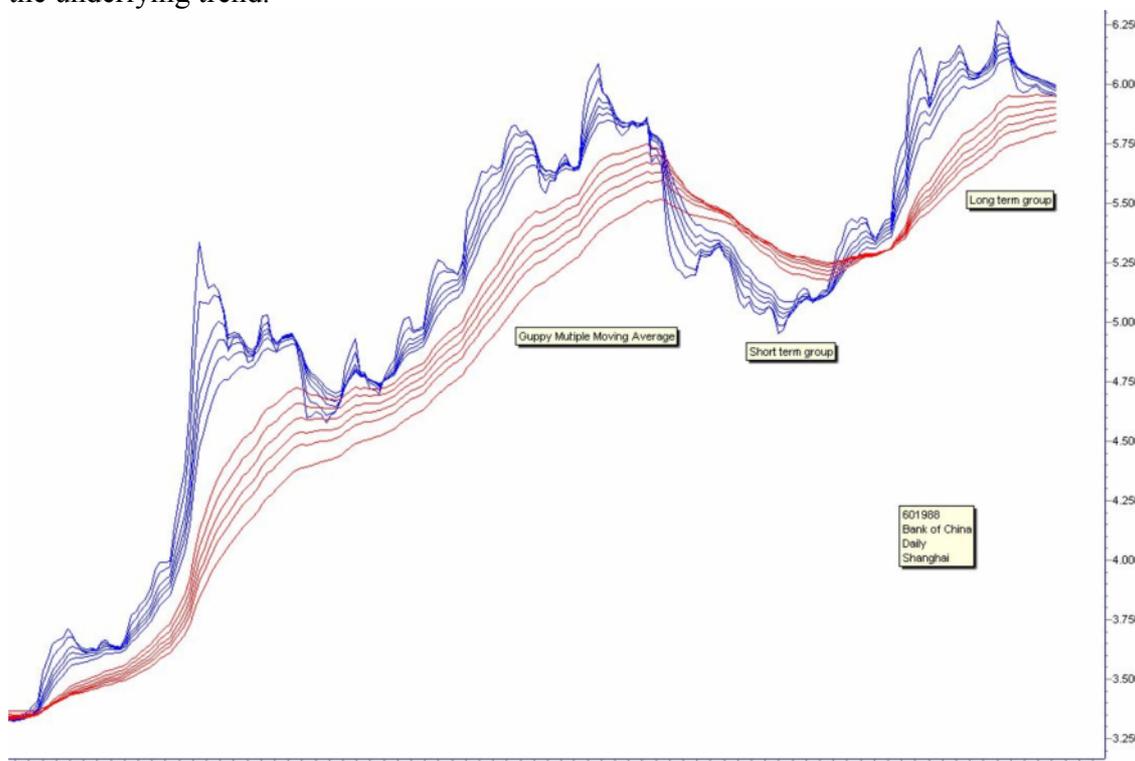
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the international market. Same company, different independent parallel markets, and different results. Profitable success comes from using tools which identify the nature of trending behavior rather than using analysis methods which are designed to establish a link between price behavior and changes in company fundamentals.

We have used Jiangxi Copper as the primary example. The same divergence between the trending and trading behavior of dual listed China stocks in the China market and the international market is consistently observed. There are more than 30 co-listed stocks. We found the same lack of trend similarity in all these. We have selected two other examples to examine briefly. They are selected because they show different aspects of this trend divergence in the two markets. We include summary analysis.

## **BANK OF CHINA**

Guppy Multiple Moving average analysis of Shanghai listed Bank of China 601988 shows three trending periods. The initial breakout develops from 2006 November. This trend ends in 2007, May. The second uptrend resumes in 2007 July. In 2007 September the uptrend is being tested. The trends are clear, strong and stable. There is a major bubble trade sell off starting 2007, January 4, but this does not threaten the underlying trend.



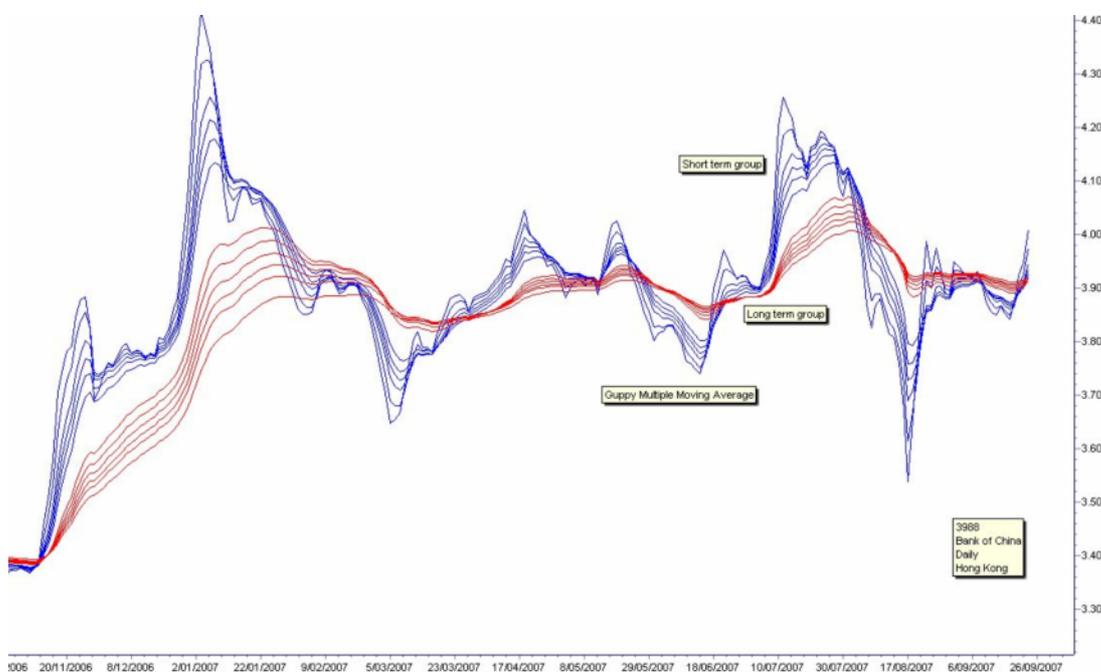
This trend behavior is different from the Hong Kong listed 3988 Bank of China. The initial trend breakout and bubble collapse develops at the same time in 2006 November and 2007 January. The result is very different. The uptrend fails to re-establish. From 2007 January through to 2007 September, the Hong Kong listing for bank of China essentially moves in sideways trend. The small Rally in 2007 April is a pale imitation of the longer term steady rising trend in the China listing. The 2007 June trend retreat in the Shanghai listing develops two weeks after the trend decline in Hong Kong. The rapid collapse in August in Hong Kong is not reflected at all in the strong uptrend in the Shanghai listing.

Despite the common fundamentals, the trading in these two stocks shows exceptionally different patterns. In terms of chart and trend analysis, they are

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unrecognizable as a single company. The charts with the GMMA indicator clearly show the differences in trading behavior. The China listing shows a low level of trading behavior. There are few instances of compression and expansion in the short term group. This shows a low level of active trading. People are buying the security and holding onto it for extended periods. This behavior does not match the preconception of China as a market dominated by short term trading and speculative activity.



The GMMA indicator on the Hong Kong Bank of China chart shows repeated occurrences of short term speculative trading. This includes the 2006 November 24 and 2007 January price bubbles. The fast rally and retreat patterns in 2007 April and May are not duplicated in the China listing. The bubble collapse in 2007 July and the extreme sell-off in 2007 August are features found in the Hong Kong listing, but not in the China listing.

These features shown in the short term group of GMMA averages indicate a much higher level of speculative activity in Hong Kong trading of Bank of China. This consistent trading impacts on the nature and duration of the long term trend. The fundamentals of the company remain unchanged, but the behaviors of traders in these independent markets is radically different.

The nature of the underlying long term trend is defined by the psychological behavior of market participants. It is not dependent upon the fundamentals of the company. This is a significant observation. Where economic analysts have been prepared to admit a role for market psychology in trading behavior they have generally not acknowledged a significant role when it comes to long term trend behavior. The theoretical assumption is that over an extended period the exuberances created by trading volatility will be absorbed in the long term trend.

Other psychological approaches have focused on the irrational behavior of individuals. In one sense these approaches try to prove that conditions of 'irrational exuberance' are created by irrational behavior. This is a common theme in several books that try to explain how market pricing diverges from 'true' value. Trader psychology is seen as an explanation for the mis-pricing the market that shifts prices above or below concepts of fair value. The difference in trending behavior suggest that it is the psychology of market behavior that rationally defines pricing. The alternative is to

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describe one market – China or international – as completely rational and the other completely irrational.

The Bank of China relationship suggest this is not an accurate analysis. Investor psychology is independent of a ‘true’ or ‘fair’ value modeling of the security price based on fundamental analysis. If this were not the case, then the long term trend behavior of the Hong Kong and the Shanghai listing for Bank of China would be more closely aligned. This lack of similarity in long term trend behavior is explained by a difference in the psychology and behavior of investors in these two independent markets.

The difference in trend behavior are more clearly shown on the candle charts. The Shanghai listing for Bank of China shows four rising trends that are easily defined in real time with a trend line.



The Hong Kong listing for Bank of China shows five clear trends. They are all downtrends. The rising trends are difficult to define with a trend line. In the Shanghai listing, the rising trends are easily defined and provide good trading opportunities with reliable entry and exit signals.

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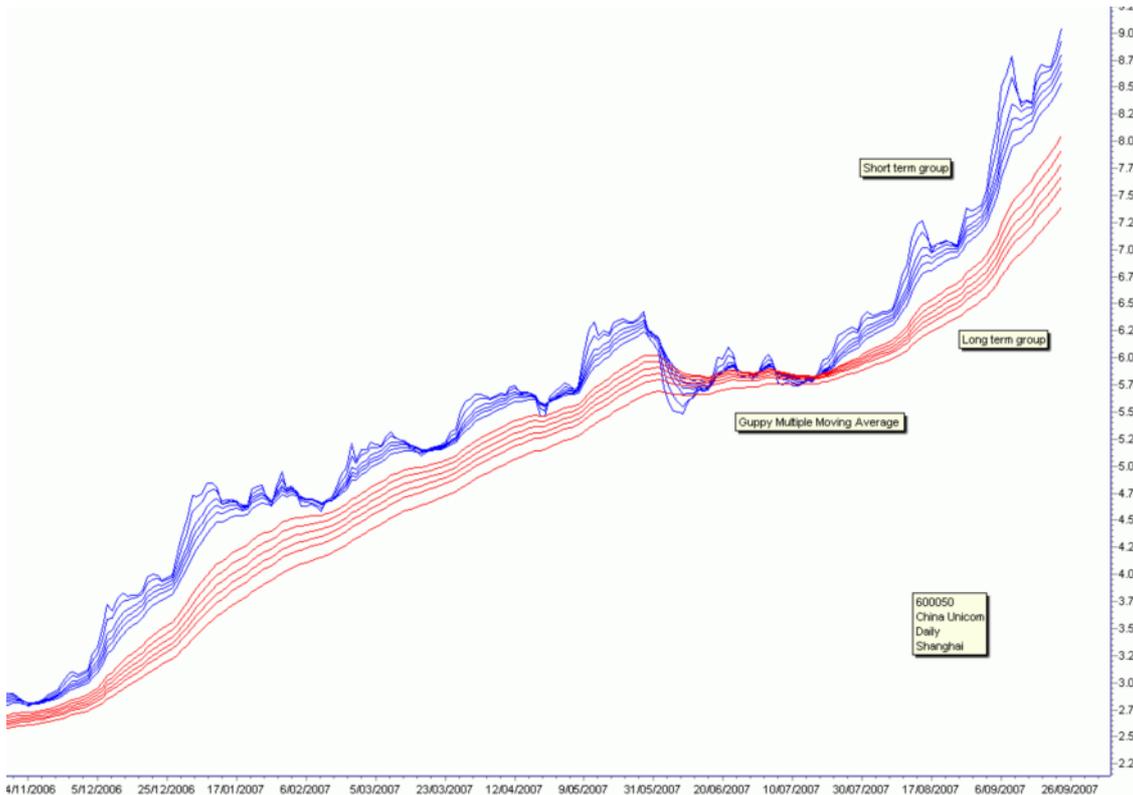
The trend behavior in Hong Kong is more erratic. It is much more difficult to develop a consistent and reliable trading plan. The differences in trend behavior are a result of the differences in market psychology because we know the fundamentals of the Bank of China are the same in both the China and the international market. The differences in trending behavior cannot be adequately explained by differences in currency rates.

### CHINA UNICOM

The Shanghai listing for China Unicom 600050 shows a primary long term trend. The trend flattens and moves sideways from 2007 June to 2007 August. This is not a trend break. It is a consolidation period that is more clearly shown on the candle chart. The GMMA relationships in this period show a need for a closer level of trade management. Conservative traders closed the trade in June. They then opened a new trade in August as the up trend was re-established.

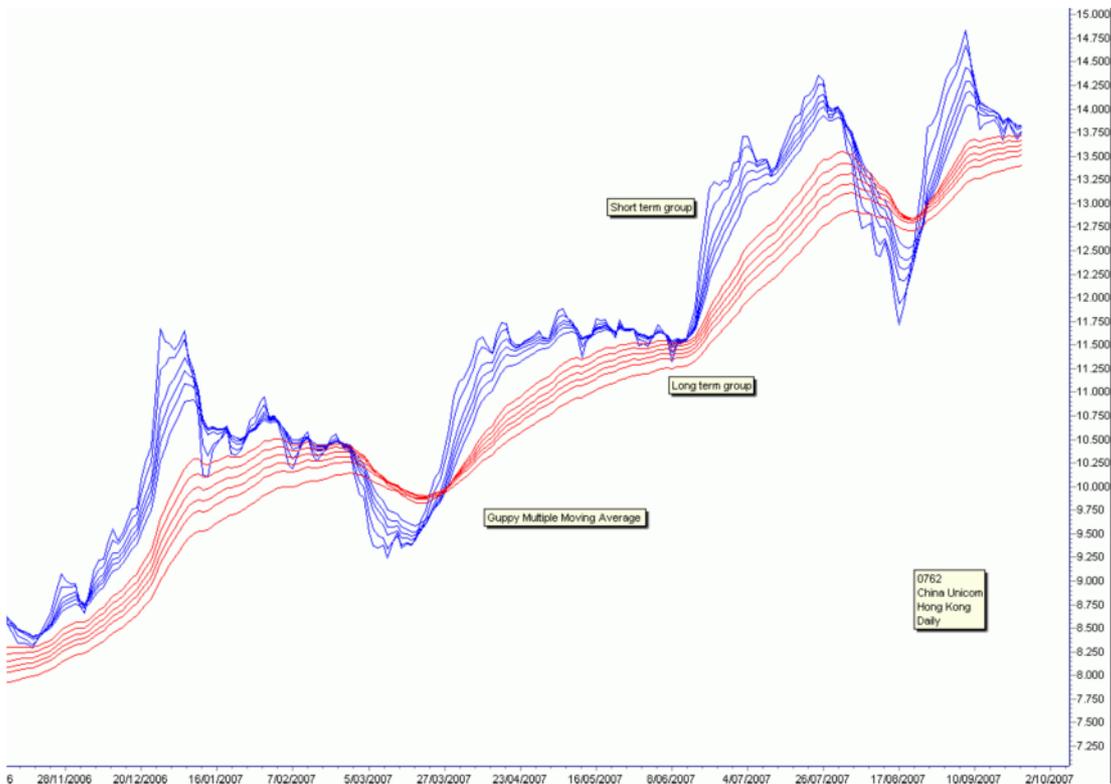
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The key feature of this chart is trend stability and a low level of trading activity. The long term GMMA group of averages are consistently separated. Trading activity is limited and has low volatility. The short term GMMA does not constantly dip into to long term group and rebound. Trading activity is more subdued.

Although the Hong Kong listed China Unicom 0762 has a broad upward bias, the nature of the trend, and of trading activity is substantially different.



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The long term trend is frequently threatened. In the 2007 January to March period the trend show developing weakness. The short term group of GMMA averages shows a high level of trading activity, with frequent small rallies and increasingly stronger sell offs. Traders are not surprised by the trend failure in March.

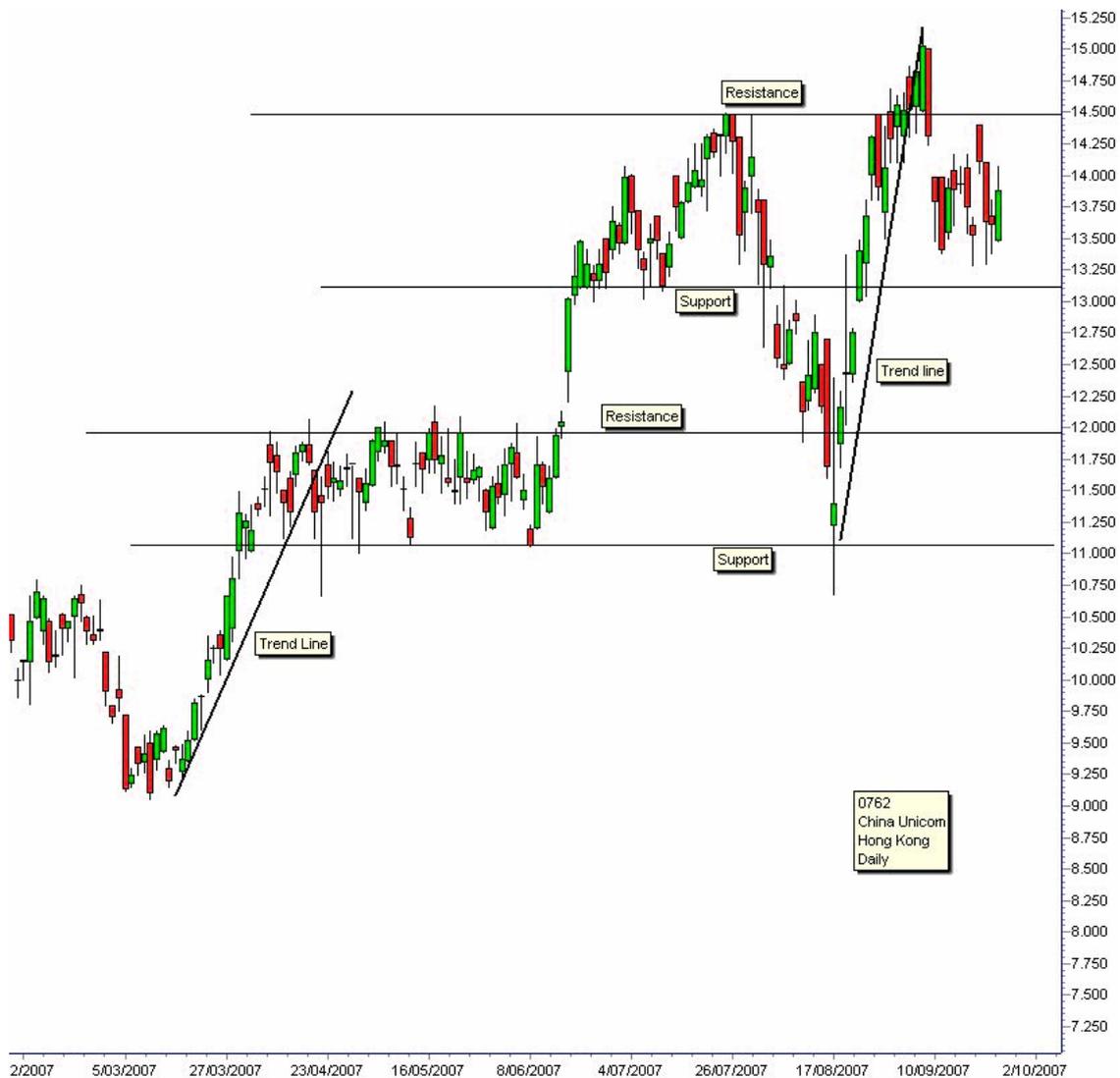
This pattern of trend weakness is repeated in 2007 June with an increasing degree of penetration into the long term group by the short term GMMA averages. This activity suggests there is less long term confidence in the stock. Traders take a short term view, quickly selling into any trend weakness. Investors are more easily convinced of trend weakness and they join the selling.

This is highlighted in the 2007 July 25 sell off that creates a complete trend break. This is followed by a fast recovery in August. None of this July or August trend behavior is repeated in the Shanghai listing.

This chart comparison shows both a difference on long term trend behavior, and in short term trading activity. A generous interpretation of the chart activity may suggest that Hong Kong listed China Unicom is best analyzed using support and resistance analysis. The first consolidation period developed from 2007 April to June. Traders can apply consolidation band target methods to set the breakout target around 13.00. The next support level developed slightly above this at 13.10. This in turn set new targets around 14.25 which are near the peak of the price move at 14.50. This is not meant to be exact analysis. It is designed to illustrate the broad compatibility Hong Kong listed China Unicom with support and resistance analysis methods.

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Support and resistance develops when the market has commonly agreed conception of appropriate fair value that remain consistent over time. A trend line shows an agreed changing conception of appropriate value over time. These repeated tests of support and resistance level provide a good guide to the changes in valuation. This is sometimes taken as evidence of a link between fundamental valuations and market valuations. If this interpretation is correct, then we would expect to see a similar behavior pattern in the Shanghai listing.

As expected, the Shanghai listing for China Unicom shows a radically different pattern of behavior. First we see a steady, well defined rising trend with trend line A. This trend breaks into a consolidation pattern. This consolidation starts around 2007 May 10 and ends on August 8. This consolidation period is longer than the first consolidation shown in the Hong Kong listing. This starts in 2007 April and ends in June. There is little correlation in the behavior.

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The breakout from the single consolidation period in the Shanghai listing is also more stable. It is defined by trend line B. There has been a recent breakout in the trend, and trend line C is used to manage this trend rise. The essential difference is that the Shanghai listing for China Unicom cannot be adequately analyzed using support and resistance methods. This has clear trending behavior with a mid-trend consolidation.

These three representative examples show clearly that the drivers of pricing, trend behavior, investment behavior and trading behavior are not the fundamentals of the company. The fundamentals, business plans, market share, management and news related factors have a much smaller role to play in the development of market behavior. These examples all rest on a single company that is parallel listed in two independent markets - the China market and the international market. Classic economic and market theory suggests that the trend and other behaviors should be largely similar. The market reality is very different. There is a very low level of correlation in trend, investment or trading behavior between the China and the international market.

This suggests that the most important determinant of pricing is the psychological behavior of the participants and that this may rationally diverge considerably from notions of 'fair value.' This further suggests that the dichotomy of rational or irrational is not a useful way to understand market behavior. It is more useful to assume that all buy and sell decisions are rational, but that they all carry a more dominant emotional component. If this is the case, then market survival depends on better understanding of the psychology of the markets emotional behavior rather than abstracted notions of 'value.'

## RATIONALITY

This lack of correlation in these two markets also infers an answer to another aspect of the division between fundamental and technical analysis. Modern economic

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theory, and behavioral financial modeling talk of the difference between rational and irrational behavior. Rational behavior leads to pricing that closely matches the theoretical fair value price derived from fundamental analysis. Pricing that is below or above this fair value is, by definition, irrational. The idea of ‘irrational exuberance’ is derived from a fundamental analytical approach to markets which in turn is derived from classic economic modeling.

Within each market the price is discovered by the market mechanism is the result of rational behavior. Whilst we might want to argue that the speed of increase in the mainland market is excessive, this is not in itself an argument for irrationality, or “irrational exuberance.” As the trend analysis has shown, the behavior, character and nature of the trends for each stock in each market are quite different. Each behavioral pattern is rational. Investors and traders carefully consider the allocation of capital. Their evaluation of risk, based on the same fundamentals, is different within different markets. The parallel listing highlights this effectively because the two markets – China and the international market – are monetarily and regulatorily distinct and independent. They are united only by the common fundamentals of the company being traded.

This unique real-time laboratory provides an opportunity to test the idea of rational and irrational. Whilst cynics might suggest that the market for China stocks is irrational, it is more appropriate to regard both markets as potentially a rational response to the fundamental information available.

Generally the gain in China listed stocks is about twice that of the Hong Kong listing. With the Bank of China chart we use a representative trend. In Hong Kong this starts from the March 5 low. The trend ends with the July 11 high. We use the close at the peak of this trend. This is a 20% return.

With the Shanghai listing for Bank of China we use the February 6 low. The trend ends on May 10. We use the close at the peak of the trend. This gives a 42% return.

The percentage gain for Jiangxi Copper China listing is 165%. This is calculated from the open price on December 4, 2006 to the close price on September 4 2007. The percentage gain for Jiangxi Copper Hong Kong in the same period is 70%.

Despite the differences in trending behavior, this comparative percentage gain results remain consistent. Depending on your perspective, this suggests either a similar level of ‘rational’ pricing in reaction to the fundamentals, or a similar level of ‘irrational’ pricing. This rational/irrational dichotomy does not provide a useful way to understand the differences in behavior with Jiangxi Copper China or Jiangxi Copper Hong Kong.

The differences in the trending and trading price behavior in these parallel listed stock cannot be adequately explained from a fundamental perspective. The wide variation in specific trend behaviors – to the extent where you may believe these are two different stocks – is not effectively accounted for using fundamental analysis.

The market is founded on fundamentals, but price discovery and trending behaviour is primarily set by the emotions and behaviour of participants. This is emotional behaviour that is reflected in a rational decision making process. People do not spend thousands of dollars in a fit of irrationality. Buying and selling is a rational decision that is filtered through a prism of emotion. The degree of emotion, aggregated in trading activity, defines the nature and character of the trend. This is the most significant and valid factor in price discovery. The differences in trending behaviour for the same company listed in two independent parallel markets confirms the importance of emotion and psychology in market price discovery. The differences confirm this is not a transient impact.

Understanding the trend and trend behaviour is the most important feature of market trading. These examples, drawn from independent markets, have shown that market pricing is largely driven by trader psychology rather than fundamentals. This

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strongly supports the idea that investors and traders have an advantage if they focus on methods to understand crowd behaviour rather than increasingly complex methods to attempt to understand the fundamental and financial performance of companies.

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### **REFERENCES**

Groenewold, Nicolaas Wu, Yanrui, Tang, Sam Hak Kan, Fan Xiang Mei, [2004] The Chinese Stock Market, Edward Elgar  
Guppy, Daryl, [1998] "Using Multiple Moving Averages" Technical Analysis of STOCKS & COMMODITIES, Volume 16: February  
Guppy, Daryl, [2007] The 36 Strategies of the Chinese for Financial Traders, John Wiley  
Guppy, Daryl, [2005] Trend Trading, John Wiley  
Li, Yang & Huhn, Robert [2007] China's Banking And Financial Markets, John Wiley  
Walter, Carl & Fraser, Howie, [2003] Privatizing China, John Wiley  
Woetzel, Jonathan [2003] Capitalist China, John Wiley  
China Stock Directory 2006/07, China Economic Review publishing.  
Red-K-Line, weekly trade advisory, HongZhouKan, Beijing, 2006-7

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