
Drobny Global Monitor

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Biases:

EQUITIES: Bearish

BONDS: Bearish; Bullish Bond Vol

FX:

EMG:

Current Exposure:

EQUITIES: Short MSCI EM & DM World Index (Mar 7);

BONDS: Receive ODF20 (Mar16);

Short US TYM6 (resold on Feb 26, initial position from Feb 23);

Long 2yr vs Short 5yr US Treasury (Feb 8);

FX:

COMD:

2016 Santa Monica Conference Review

** Please note latest changes to biases and/or exposure*

Trend change is in the air. Is it real or merely a pause generated by recent policy actions? In FX, the sense from the 2016 Santa Monica Conference is this could be the real thing. One panelist certainly thinks so and asserted that ‘the USD rally has ended’. He appealed to some hidden factors in the US C/A position. And, audience polls taken during the event showed a much more balanced view, and positioning, on the USD than in the past several years (Section 11). Audience favorite trades were likewise mixed on the USD for the first time in years (Section 12).

Another panelist argued that the trend in certain commodities has also changed. He presented a short commodities trade at the 2014 Santa Monica Conference and has turned only recently, and suggests buying grains which are lagging the rebound. The audience was with him – the polls showed the group bullish and long both oil and gold (Section 11, qns 6-9). Another panelist argued that inflation in the US looked to be turning up for real, while in Brazil it is going the other way fast. If correct, both are big trend changes. The long Brazil leg of a fixed income RV trade had moved a long way, which currently pointed to selling the US fixed income as the better value trade here.

And, if trends in commodities and the USD are changing, then it shouldn’t surprise that EM looks better as well. One panelist made the case for buying Argentine assets. Another wasn’t so sure: he suggested receiving Brazilian rates but also selling the Bovespa against it.

And, there was quite a controversy regarding equities. The idea of an equity melt-up came up in three different panelist presentations. One argued that Eurozone equities were set to catch up quickly and recommended buying Eurostoxx calls funded by paying Itraxx main receivers. Another pitched buying short dated SPX calls. They are exceptionally cheap and falling vol could prompt vol sensitive strategies to chase the market higher. A third, who actually pitched a JPY swaption straddle, also liked buying NKY vol. The audience wasn't so sure about equities directionally. Their choice of favorite trades in equities was mixed (Section 12). And, intriguingly, polls revealed a bearish bias (and a sizeable 'very bearish' group) yet, the audience seemed to be generally running long equity positions (Section 11, qns 12, 13). That's a recipe for volatility.

And, that's something that hasn't changed. Buying vol has been popular in this group since the summer of 2014, and that continued through this conference. Buying vol motivated the JPY swaption presentation and played a role in the SPX call trade as well. It also played a part in another neat panelist trade: buying a 1x2 3m1yr USD receiver spread as a leveraged play for negative rates. What has changed, though, is the view of relative vol. There was a sense that FX vol may have peaked. FI and Equity vol look more interesting to this group of managers.

Below is a review of the 9 presentations and subsequent discussions (bios of the speakers are at the end of this piece). The occasional comments in brackets [.....] represent my own post-conference comments. Please remember that this is a personal view of the proceedings. Comments, critiques, additional trade ideas, guest pieces, etc, are welcomed. The more diverse the dialogue, the better!

Thanks to everyone for making the SM Conference an interesting and fun exercise. And, special thanks to our friends and partners at BNP Paribas for their continued support.

1) Michael Dooley of Cabazon Investment Group and Drobny Global asserted that the USD rally is over, and the downside to the USD could be opening up again. The implication was to either sell spot USD or take advantage of high vol to sell longer dated USD calls. Mike challenged the idea that FED tightening will lead to USD strength. FED rate normalization, he argued, would reveal a problem beneath the surface in the income account in the C/A. It is ironic, Mike suggested, that the fundamentals for the USD look worse than in 2006, when it was popular to assume the USD had substantial downside risk. Instead the USD has rallied strongly and has now reached a real value above 2006 levels.

How can things be worse for the USD than in 2006? The current account deficit looks ok and, at around 3%, is well below the 6% deficit recorded in 2006. The deficit in oil is down and the deficit in goods has remained remarkably stable despite US growth outperformance. Where's the problem? It's in the stock of US net foreign debt, which has increased sharply from around \$3trln in 2010 to around \$7trln today. Back in 2006, when USD alarm bells were ringing, and the real value of the

USD was lower, the US net debt position was only \$2-3trln. This is the accumulated effect of 10 years of the US running an average 3% of GDP C/A deficits. Without any adjustment.

Yet, this bigger net debtor position has not yet affected C/A flows. But they lurk underneath. It's due to a quirk in the composition of US international assets and liabilities. The bulk of the liabilities are in fixed income; many of the assets are in equities and real assets. Low rates have reduced outflows of income payments abroad while solid performance of equities and real assets have led to increased inflows. Can we think of this as a QE effect, asked a member of the audience? QE goosed up all assets, pushing down bond yields and pulling up returns on equities and other risk assets. It's an unanticipated consequence of QE.

As US rate normalization proceeds, the C/A deficit will widen, and it could be sudden and sharp. And, probably won't be generally understood. If US rates rise, then the US pays more on the now larger stock of overseas debts, pushing up the C/A deficit and making USD underlying funding flows more demanding. A similar thing may happen if global equities and real assets tank.

Interestingly, the audience were more constructive on the USD's, and were running a modest long (Section 11, qns 1,2 & 10,11). An easy Fed is baked in and there is an assumption of policy impotence abroad. There is good reason to suspect that strong data could push the USD back up.

But, Mike's point is that any rebound premised on FED hikes should prove transitory. [Implicitly, Mike seemed to argue in favor of selling the USD on a forward outright basis. If the US faces an eventual increase in the cost of financing its stock of foreign debt, then either US rates have to rise or spot USD will have to fall.]

2) Anuraag Shah of Tusker Investment Fund argued that the long bear market in commodities had ended and suggested buying softs, especially grains like corn and wheat which have lagged the rebound seen in other commodities. Anuraag claims 'QE wiped out OPEC'. QE led to too much credit being available to commodity producers and helped create an oversupplied market. But, by Dec/Jan, commodity by commodity overshot the cost of production to the downside. That, in turn, generated conditions for the recent bounce. It should prove durable, Anuraag claimed.

Soft commodities have lagged the move and are still trading close to the marginal cost of production. The price of corn is admittedly higher than in 2003-2006, but Anuraag pointed out that the price of farm land is up considerably since then, and that is a major input into costs. And, the best time to buy commodities is when an oversupplied market turns into a balanced market. That, he claimed, is the position we are now in. You don't need a shortage to get a sustained rebound.

There were several questions. First, isn't this simply a USD surrogate trade? No, Anuraag doesn't see it that way. Instead, it's about marginal costs of production: there was an overshoot to the downside in the commodity price blowout of the past 18-24 months and commodity prices overshot marginal cost. That limits the downside to the trade.

But, there are record stocks of corn in the US. Why should price rise in such circumstances, asked a participant? Yes, there is oversupply in the US. But, notice that Brazil, the world's second largest producer, has become a net importer. This is apparently due to El Nino effects that held down production and also reflects reduced import tariffs in that country. That's the main change in the equation.

3) Chase Muller of One River Asset Management made the general case for buying vol and his specific trade was to buy a JPY swaption straddle. Central bank impotence in Europe and Japan has the potential to lead to more innovative policy responses, leaving equity and interest rate markets exposed to potentially sharp movements.

Chase emphasized this works in both directions. New fiscal stimulus measures might result in a 1999-like blowoff equity event. And, 'Volckerized' banks can't take on much risk which adds to illiquidity dangers and creates an environment for dislocations. With FX implieds looking high relative to FI or equity implies, Chase recommended rotating the long vol exposure to fixed income and equities. His favorite version of this is to buy 2y10y JPY swaption straddle. Vol is low, and the position benefits from 20bps of positive roll. Against a spot rate of 12bps, the BE's are at 70bps, where we were trading under a year ago, and -.10bps, not far away. This lower bound is interesting since banks have a limited number of JGB's to sell now and with the zero bound having been broken by the BoJ.

But, what happens if the BoJ actually fix the yield on JGB's, Chase was asked? That's a reason to look to equity vol instead, and buying 1yr fwd NKY vol is also a favorite for Chase. That also looks cheap and is much less exposed to this type of manipulation.

4) Chris Leonard of Arcem Capital also played with FI vol in suggesting a neat little 1x2 3mth1yr receiver spread where you sell a receiver struck at 62bps and buy twice the amount of a receiver struck at 55bps (current 1yr is at around 75-80bps) for zero cost. This provides leveraged exposure to speculation that the FED will move to negative rates. Because it's zero cost, the plan is to repeat the exercise, which then frees you up to think about the higher probability event of higher rates.

Behind the trade is the concept that, once the zero bound is broken, there will eventually be a reaction in yields and vol as the market gropes for a new bottom for rates. [The latest Swedish

Central Bank Bulletin has a fan chart for the range of repo rate outcomes; for 2018, the 90% confidence interval includes both +2.5% and -2.5% yields. As Chris noted, it seems central bankers face the same problem once the zero bound is broken.]

This uncertainty on the floor for rates produces an interesting anomaly, especially with vol. When the zero bound is perceived as a barrier, then vol tends to fall yields drop and the zero bound is approached. Yet, the removal of the zero floor has typically resulted in a quick and sharp reassessment of the likelihood and the distance rates will drop below zero. This means that vol has tended to rise as rates actually went below zero. This concept generated considerable buzz at the afterparty, where several participants expressed an interest to look to other countries, especially in Europe, where rates are still positive and rates markets are liquid enough where a similar trade might be implemented.

5) Olivier Osty of BNPP recommended buying SX5E calls funded by selling iTraxx Main receivers. The specific trade he chose was to buy EUR 80mn of Sept16 calls struck at 3100 and selling EUR 1bn of Sept16 receivers struck at 70bps (refs are 3116 and 70.75bps), for zero cost.

The basic premise is that ECB buying of corporate bonds starting in June is well anticipated. Spread compression may thus have little further to go when the actual buying starts. That's what happened after the covered bond purchase programme commenced in 2014. Meanwhile, equities have lagged the move in Euro credits. Corporates are flush with cash, rates are negative, dividend payouts are high, accelerated CAPEX investment is unlikely and M&A is limited by a crackdown by regulators. This suggests that the Eurozone is set to follow the US with a wave of equity buybacks. This would be the catalyst for the next step in the cycle, Olivier argued, which is that equities take off.

There was considerable discussion. One participant suggested the trade would suffer if the ECB move to even more negative rates. As happened in Japan, that could simultaneously disturb equities while pushing yields down sharply. Another decomposed the trade into two components: buy the Eurostoxx Index and fund by selling the Itraxx – the cash side of the trade; and then buy SX5E vol and sell an Itraxx main straddle – the relative vol side of the trade. If fixed income has anticipated the effect already, yields may not move far once ECB buying commences. Maybe the relative vol trade is the best RR trade in these circumstances.

6) Luiz Parreiras of Verde Asset Management suggested receiving rates in Brazil and selling Bovespa futures against this. Brasil is going through its worst recession ever with exceptionally high leverage. The economy is tanking, inflation is now falling and the likelihood is that rates will be cut faster and further than expected. Yet, this is now a crowded trade, though it still makes sense. So, against this, take advantage of excitement about impeachment and political change which has

bolstered the equity market. But, with Government expenditures mostly mandated and tough to cut without deeper reforms, an awful fiscal position means that eventually taxes will have to go up. This form of fiscal tightening tends to be interest rate positive and equity market negative.

Brasil's external accounts are much improved due to the recession, and that serves to stabilize the BRL. This in turn brings down inflation and, opens the door to rate cuts. Some of this is priced in, but not all, Luiz argued. In contrast, the Bovespa prices in a lot. The PE is very high relative to history and relative to other EM markets. There's a lot of optimism built in. And impeachment flips timeframes. Without impeachment, there was a runway for positive change in the election in 2018 – a basis for optimism. That optimism has now been brought forward. The result is a new uncertainty going towards that election where 'a 3rd way' - another 'anti-establishment' party - runs against a likely new government. In such a sour economic environment with tax hikes needed, the honeymoon period for a new government will likely be short and shallow as the new guys in charge shoulder more and more of the blame for what is likely to be a lingering economic malaise.

7) Peter Karmin of Fort Sheridan Advisors recommended buying 3mth 110% SPX calls. Peter's motivation is the potential for a melt up in equities. This is not about valuations, it is about low realized volatility and the changing composition of the investment community. At a time when call options on US equities have never been cheaper.

There has been a huge increase in vol momentum oriented strategies. Vol targeting strats are now \$360bn, and when realized vol is low this should trigger buying. And, they tend to use short term signals. Risk Parity strategies, which are now approx \$500bn, tend to re-allocate more slowly, but they too allocate inversely to volatility. And, trend following CTA's could add to the punch. All this as 'fear indexes' are exceptionally high – right now you can buy a 10% 3mth OTM call and sell a 40% 3mth OTM put for zero premium. These are ingredients for a potential melt up.

This idea proved controversial, and the debate lingered late into the night. One participant noted that with such a trade, you can be right on direction but make no money if the rally is a grind rather than a melt up. Another asked why do the trade now, after such a big rally in equities recently? One answer concerns the USD. If it is now turning down, this boosts the SPX relative to Eurostoxx or NKY and, if anything, positions are likely the other way.

At the afterparty, several questioned the notion that the large downside bias in the risk reversal means real money managers are actually short their index. In fact, the high price for puts suggests managers hedged via options and still have large cash positions; they are likely running positive gamma positions already. There may be no need to chase. And, one participant talked about Cliquet hedging, where insurance companies sell long dated upside vol, forcing desks to hedge by selling short dated upside calls. That not only explains why calls are cheap but, he suggested, this type of

skew anomaly emerges as the equity market rallies and often is, ironically, a good sign that we are near a top due to this type of hedging activity. Taking this cue, one participant turned Peter's proposal upside-down. He suggested buying call options and using delta hedging to create synthetic SPX puts as a way to get cheap and low risk exposure to an equity drop over the summer.

8) Patrick Wolff of Thiel Macro argued in favor of buying Argentine assets, with an emphasis on local law USD linked bonds, internationally traded ARS equities, and ARS bills. In a tough market where many assets look expensive, here's an idiosyncratic trade in a country where they are re-establishing a debt profile, the reform agenda is serious, the balance sheet is compelling, and the country has substantial oil and gas reserves. Moreover, the highly regarded Federico Sturzenegger has been named head of the central bank, which is reassuring. As a result, the ARS has been strengthening amidst very high, but falling, inflation and high nominal interest rates. So, you can receive yields on ARS denominated bonds in the upper 20%'s for shorter dates, or, for example, you can get a 7% yield on a 6mth duration USD local law bond and avoid currency risk. And, Patrick argued, the real long term juice is to buy real assets.

This trade also proved controversial and several problems were raised by participants. The trade seems to rely heavily on ARS strength, and there are fears that everyone is entering the trade at the same time. An unwind could be vicious. And, although the yields on USD bonds look tasty and avoid much of this risk, they are also relatively illiquid and use up a lot of balance sheet. Moreover, when foreigners buy these bonds, there is a complication as they actually have to conduct conversions in and out of the ARS which introduces blue chip vs official rate convertibility risk which can eat into yield, and deliverability issues which can complicate the timing of receipt of payments. More generally, some of the veterans in the audience warned that this is an insider's game with a long history of failing to adhere to agreements. At the afterparty, one of those complained that the central bank still owes him for work he did for them back in 2002!

9) Yours truly recommended selling US longer dated bonds or a US 2/5 steepener. This is part of a larger RV trade which is short US fixed income (with a steepening bias) and long BRL fixed income (with an inversion bias). Since the BRL side has performed strongly in recent months, the emphasis now is on the US side of the trade. Behind this RV structure is the idea that inflation surprises have emerged. In the US it's to the upside; in Brasil it's to the downside. In both countries the central banks have shown a willingness to tolerate these surprises and have held rates steady. So, in the case of the US, the slower the FED tighten in the face of accelerating inflation, the more they will eventually have to tighten. The mirror opposite seems true in Brasil.

There were several problems raised with this structure. A first problem is that both sides of the structure can lose if equities get derailed, which slows US growth and threatens the recovery in EM.

Yup, the trade is best executed in a portfolio that is short equities. A second question is whether the acceleration in US inflation is real or transitory. On that one we'll just have to see. But, perhaps the most telling criticism is that this structure is already popular and well trafficked. Yup, that is true! The same bias and positioning showed up in audience polls and audience favorite trade selections (Sections 11, 12, and look at the end of Section 12 for end 2016 surprises).

[One participant suggested at the afterparty an interesting US 2/10 steepener trade: buy a 6mth dual digital where you win if 2's don't hit 130bps and 10's go above 210. This is similar, though not identical to a conditional steepener and costs 12%, for a payout of over 8-1.]

Andres Drobny

**Past reports can be accessed at www.drobny.com*

10) Drobny Award Recipients

Two awards were presented at this conference:

Best Trade from 2015 London Conference: Peter Karmin, Fort Sheridan Advisors, for recommending selling the SAR vs the USD forward outright. He not only grabbed a nice move, but also captured early a more general market tone where currencies pegged to the USD came under attack early in 2016.

All Time Best Trade: Patrick Wolff, Thiel Macro, for his 2011 trade of buying the S&P and selling the Aussie dollar. This trade, premised on a decent recovery in the US at a time when China seemed dangerously exposed to a bursting of the investment bubble was a home run, with both sides performing strongly. This was one of the all time best trades presented at a Drobny Conference, and places Peter amongst other famous winners such as Peter Thiel himself (long oil shale producers in 2004).

11) Audience Poll Results

1) What is your current view on the USD?

Extremely bullish	4	5%
Moderately bullish	32	37%
Neutral	20	23%
Moderately bearish	25	29%
Very bearish	5	6%
Total Votes --86		

2) What is your current positioning in the USD?

Very long	4	5%
Moderately long	30	38%
No position	22	28%
Moderately short	21	26%
Very short	2	3%
Total Votes --81		

3) What is your current view on the 10yr US treasury?

Extremely bullish	4	5%
Moderately bullish	18	23%
Neutral	14	18%
Moderately bearish	36	46%
Very bearish	6	8%
Total Votes --78		

4) What is your current positioning in the 10yr US treasury?

Very long	2	3%
Moderately long	10	13%
No position	36	47%
Moderately short	23	29%
Very short	6	8%
Total Votes --77		

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5) What is your current positioning in front end Brazilian rates markets?

Very long	5	6%
Moderately long	16	20%
No position	48	63%
Moderately short	4	5%
Very short	5	6%
Total Votes --78		

6) What is your current view on Oil?

Extremely bullish	6	7%
Moderately bullish	18	25%
Neutral	37	53%
Moderately bearish	10	14%
Very bearish	1	1%
Total Votes --72		

7) What is your current positioning in Oil?

Very long	6	8%
Moderately long	26	36%
No position	26	36%
Moderately short	14	19%
Very short	1	1%
Total Votes --73		

8) What is your current view on Gold?

Extremely bullish	6	9%
Moderately bullish	21	31%
Neutral	24	35%
Moderately bearish	15	22%
Very bearish	2	3%
Total Votes --68		



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9) What is your current positioning in Gold?

Very long	6	8%
Moderately long	14	20%
No position	41	62%
Moderately short	5	7%
Very short	2	3%
Total Votes --68		

10) What is your current view on the Japanese Yen?

Extremely bullish	6	8%
Moderately bullish	20	28%
Neutral	16	23%
Moderately bearish	19	26%
Very bearish	11	15%
Total Votes --72		

11) What is your current positioning in the Japanese Yen?

Very long	3	4%
Moderately long	9	13%
No position	42	59%
Moderately short	15	21%
Very short	2	3%
Total Votes --71		

12) What is your current view on MSCI Global Equities?

Extremely bullish	4	5%
Moderately bullish	19	24%
Neutral	15	19%
Moderately bearish	27	35%
Very bearish	13	17%
Total Votes --78		

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13) What is your current positioning in MSCI Global Equities?

Very long	6	9%
Moderately long	21	30%
No position	24	34%
Moderately short	15	21%
Very short	4	6%
Total Votes --70		

14) What is your view on number of FED hikes in 2016?

Likely to cut rates	3	4%
No rate hikes	19	24%
One rate hike	32	41%
Two rate hikes	21	27%
More than two rate hikes	3	4%
Total Votes --78		

12) *Summary of Audience Favorite Trades*

Fixed Income Total: 30

Largest samples:

- 7 Short US Rates (4x Eurodollars; 3x 10yr Treasuries)
- 5 Long BRL rates (4x DI's; 1x linkers)
- 5 Long US Inflation (4x 10yr Break Evens; 1x Inflation Swaps)
- 3 US curve steepener
- 2 Long ARS local bonds
- 2 Long 30yr US Tips (1 vs payer swaptions)

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FX Total: 28

Largest samples:

7 Long USD (3 vs JPY; 2 vs KRW)
7 Short USD (4 vs JPY)
4 Short AUD (1 vs CAD)
2 Short TRY (1 vs ZAR)

Most interesting/unusual: Short 3yr 25delta strangles on USD/JPY; short longer dated ZAR vol.

Equities Total: 16

Largest samples:

5 Long (2x China; 1x US cyclical; 1 x NKY)
4 Short
2 Long NKY vs SPX
2 Long SX5E 2016 Dividends
2 Long Equity Vol

Most interesting/unusual: Long short levered ETF's vs Short long levered ETF's

Commodities Total:9

Largest samples:

3 Short oil
3 Long oil (1 vs short iron ore)

Other Favorite Trades: 3

Long Gold vs EUR/SEK/CHF
Long BRL DI vs Short IBOV
Long HY vs Short SPX

Biggest Surprises in 2016 (largest samples)

- 10 President Trump
- 5 US Inflation surprises to the upside
- 5 Brexit (1 x and gbp rallies; 1 x Brexit and Grexit)

- 3 US recession
- 3 No more FED hikes
- 3 SPX falls sharply
- 3 Chinese growth accelerates
- 3 Sharp oil price rally
- 2 BoJ pursues helicopter money

Also:

- South Africa receives IMF bailout
- Turkish war with Russia
- UK wins the Euro cup
- At the Santa Monica conference 2017, we will be discussing West Ham's EPL championship
- Bill Ackman makes money on his Valeant investment
- Brazil defaults
- Greek bonds admitted into QE
- Draghi resigns
- Yellen resigns after US election

PANEL BIOGRAPHIES: Drobny Global Conference, Santa Monica 2016 ***Exclusively Sponsored by BNP Paribas***

Dr. Mike Dooley ~ Cabezon/Drobny

Michael Dooley is a partner at Drobny, a Partner at Cabezon Investment Group, and a Professor of Economics at the University of California, Santa Cruz. He is also a Research Associate of the National Bureau of Economic Research and is a Managing Editor of the International Journal of Finance and Economics. He previously held positions at the Federal Reserve Board's International Division, the Research Department of the International Monetary Fund, and Deutsche Bank. His published research covers a wide range of issues in open economy macroeconomics including work on global imbalances, crises in emerging markets, debt restructuring, and capital flight. Professor Dooley received his PhD from Penn State University.

Peter Karmin ~ Fort Sheridan

Mr. Karmin is the founder and Managing Member of Fort Sheridan Advisors LLC, a Chicago-based investment boutique. Mr. Karmin is the portfolio manager for the Fort Sheridan Japan Fund, CL Asymmetry Fund and other single investor mandates. Mr. Karmin has extensive experience trading fixed income, equity and currency markets in both cash and derivative products in the U.S., Europe and Asia. Prior to starting Fort Sheridan in 2009, Mr. Karmin worked for 15 years at Perot Investments, the family office of Mr. H. Ross Perot. Mr. Karmin was responsible for developing and implementing global interest rate and FX strategies. During his tenure, Mr. Karmin was also a partner in Parkcentral Capital Management and a portfolio manager for Parkcentral Global, a \$2.7 billion multi-strategy absolute return hedge fund. Mr. Karmin received a Bachelor of Science in Journalism and an MBA from Northwestern University.

Chris Leonard ~ Arcem

Chris Leonard is the founder and CIO of Arcem Capital, a global macro and fixed income hedge fund based in NY that launched in September 2012 and is currently managing \$275mm. Prior to Arcem, Chris was a founding partner at Alphadyne Asset Management and lead Portfolio Manager responsible for the Liquid Rates investment strategy. Prior to Alphadyne, Chris spent ten years at JP Morgan, where he ultimately served as Managing Director and Head of the New York Interest Rate Swaps and Options Trading business. He currently serves on the board of Harlem RBI. Chris graduated magna cum laude from Princeton University with a B.S. in Mechanical Engineering.

Chase Muller ~ One River Asset Mgt

Chase Muller is a Portfolio Manager at One River Asset Management. Chase oversees macro thematic discretionary portfolios and brings extensive experience in the financial markets in the areas of portfolio management, trade structuring, derivative trading, economic research and analysis, and is a member of the Firm's Investment Committee. Prior to One River, Chase was a portfolio manager and research analyst for Grant Capital Partners, a \$1.25 billion discretionary global macro hedge fund where he became Grant Capital's youngest partner. Prior to Grant, Chase was a research analyst and trading assistant for the global macro team at Peloton Partners, a \$3 billion multi-strategy hedge fund. Chase holds a B.S. *cum laude* in Finance and Accounting from the University of Southern California.

Olivier Osty ~ BNP Paribas

Mr. Osty is the Global Head of Sales and Trading for BNP Paribas Global Markets, where he oversees the bank's leading capital markets business since his appointment in 2014. He joined BNPP in 1991 on the Equity platform in Tokyo. From 1995 to 2000, Olivier took on responsibility for the Options Trading business in Europe, before being appointed Global Head of Options Trading for the Equity Derivatives Business in 2000. He was promoted to Global Head of Trading, research and structuring in 2004. In 2007, he was appointed as Deputy Head of the Equity Derivatives business, maintaining a specific mandate to run all trading activity including quantitative research and risk. In 2010, Mr. Osty was appointed Deputy Head of Global Equities & Commodity Derivatives.

Luiz Parreiras – Verde Asset Management

Luiz Parreiras is partner and chief strategist at Verde Asset Management, a \$10bio investment firm based in São Paulo, Brazil. He works alongside Luis Stuhlberger in the team running the Green Fund, a \$6.5bio multi-strategy hedge fund that started in 1997. He oversees macro strategy for the firm, working alongside the economists and analyst teams to devise the best ideas across multiple asset-classes from equities, fixed-income to currencies and commodities. He joined Hedging-Griffo in 2002 as an intern in the equity team, became a partner at the firm in 2006, before it was sold to Credit Suisse in 2007. Verde was spun-off from within Credit Suisse at the end of 2014. Luis has a degree in Industrial Engineering and a Masters in Applied Math, both from University of São Paulo (USP).

Anuraag Shah ~ Tusker Capital

Anuraag Shah is the Portfolio Manager of the Tusker Investment Fund, which invests in global equity and commodity markets using a fundamental strategy, analyzing physical commodity markets and industrial sectors such as energy, mining, agriculture and transportation. Mr. Shah started his career at Goldman Sachs as an investment analyst, and then continued at Morgan Stanley as a derivatives trader. He developed his current strategy at LouisDreyfus Commodities at the start of the current commodity cycle in 2004, and then further refined it as a liquid hedge fund strategy at Balyasny Asset Management. Mr. Shah launched it as a stand-alone fund at Tusker. Mr. Shah graduated from the LSE with an MSc/BSc in Economics and earned an MBA from INSEAD.

Patrick Wolff ~ Thiel Macro

Mr. Wolff is a managing director and portfolio manager at Thiel Macro LLC. He was previously founder and managing member of Grandmaster Capital LLC, a long/short equity hedge fund from January 2011 – June 2015. Prior to founding Grandmaster Capital, from August 2005 – December 2010 Mr. Wolff was a managing director at Clarium Capital Management, the predecessor fund to Thiel Macro LLC. Mr. Wolff graduated from Harvard University in 1997 with an AB in philosophy, magna cum laude and phi beta kappa. Mr. Wolff is also a chess grandmaster and played chess professionally from 1989 – 1997, and was twice US Chess Champion, in 1992 and 1995.

Andres Drobny ~ Drobny Global Advisors

Andres Drobny is the founder of Drobny Global Advisors, a financial markets research boutique that advises a select group of hedge funds, proprietary traders, and global money managers on world markets. Before starting Drobny Global Advisors, he served as Strategist & Proprietary Trader at Credit Suisse in London and NY, and was on the Global Foreign Exchange Management Committee. Drobny also served as Chief Economist & Head of Research for Bankers Trust Company, London. Prior to entering the financial markets, Drobny was an academic economist at the Universities of Cambridge & London and holds a PhD in Economics from King's College, Cambridge.

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