PABRAI INVESTMENT FUNDS

1220 Roosevelt, Suite 200
Irvine, CA 92620-3675
USA

Tel. +1949.453.0609
mp@pabraifunds.com
www.pabraifunds.com

To: All Limited Partners and Investors of the Pabrai Investment Funds

From: Mohnish Pabrai, Managing Partner

Date: July 14, 2016

Re: **Q2 2016 Results**

Dear Partners:

For the quarter ended June 30, 2016, $2.5 million was added to PIF3 by new investors.

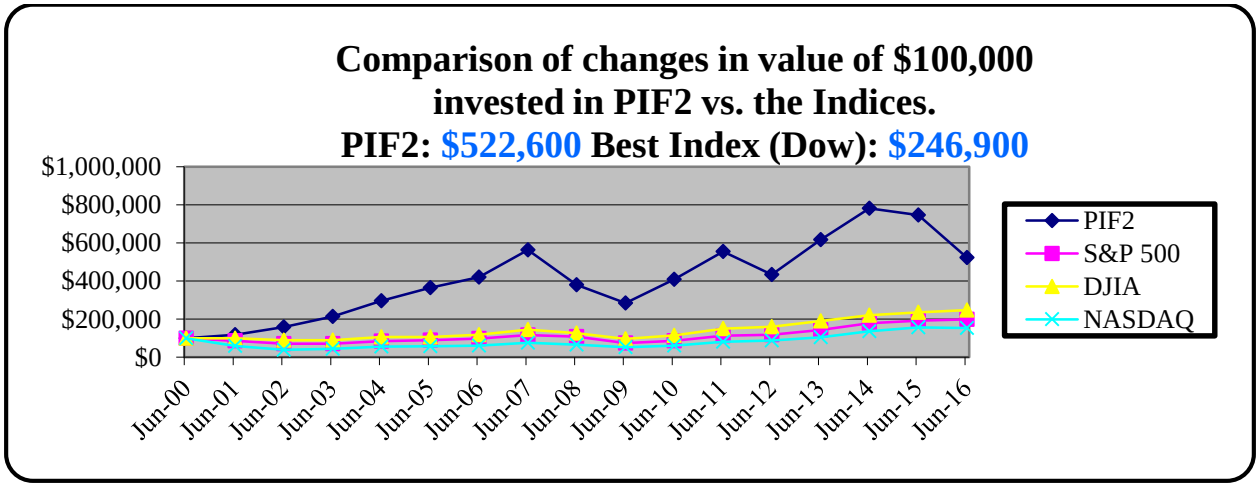
For the last several years, PIF2 and PIF4 have been closed to new investors. They have also been closed to existing investors to add funds. Both funds are now open. While we have dry powder, I think it is prudent to increase cash at this time to help offset potential redemptions. The minimum investment is $2.5 million if you are a new investor. Existing partners can add as little as $25,000. The next opening is on October 1, 2016.

For PIF3, the minimum investment to join as a new PIF3 investor is $2.5 million for individuals and $10 million for IRAs/Foundations/Endowments. For current investors, the minimum addition to their current investment is $25,000. The next opening is on August 1, 2016. If you are interested or would like more information, please contact Betsy Harker or me at bharker@pabraifunds.com and mp@pabraifunds.com, respectively.

The updated performance numbers on all the funds are:

PABRAI INVESTMENT FUND 2 (US Accredited Investors) Performance Summary:

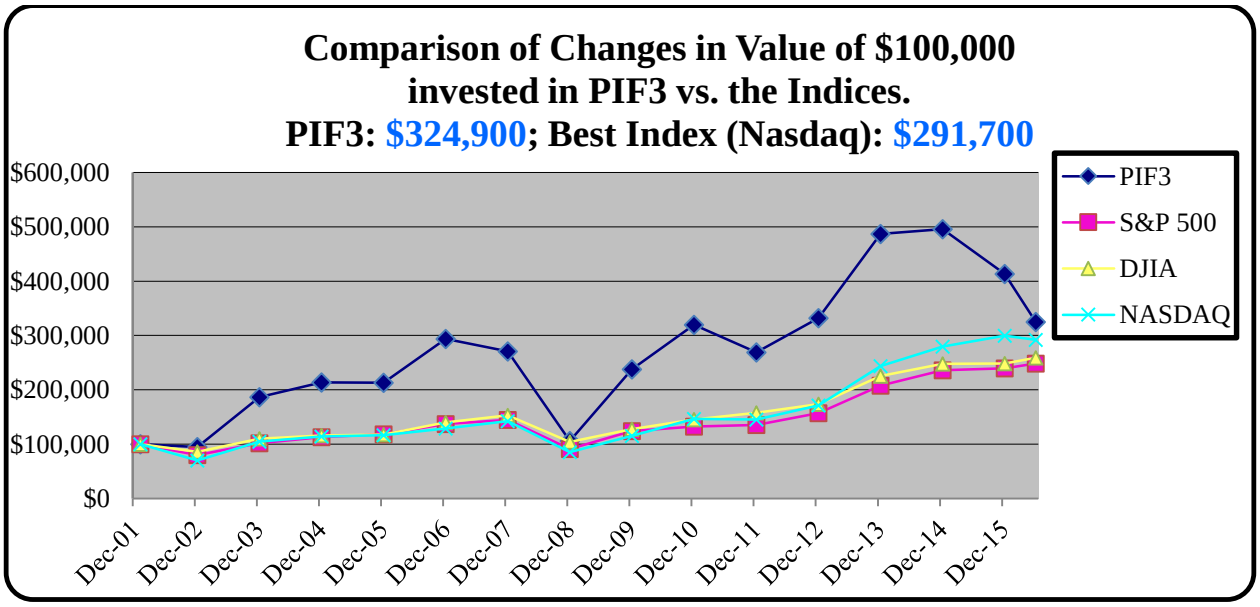
	DJIA	NASDAQ	S&P 500	PIF2 (net to investors)
10/1/00-6/30/01	-0.2%	-41.0%	-14.0%	+17.4%
7/1/01-6/30/02	-10.3%	-32.7%	-18.0%	+35.3%
7/1/02-6/30/03	-0.5%	+11.4%	+0.3%	+34.2%
7/1/03-6/30/04	+18.6%	+26.8%	+19.1%	+38.7%
7/1/04-6/30/05	+0.7%	+1.1%	+6.3%	+23.4%
7/1/05-6/30/06	+11.1%	+6.5%	+8.6%	+15.0%
7/1/06-6/30/07	+23.0%	+20.7%	+20.6%	+34.0%
7/1/07-6/30/08	-13.3%	-11.2%	-13.1%	-32.4%
7/1/08-6/30/09	-23.0%	-19.1%	-26.2%	-25.2%
7/1/09-6/30/10	+18.9%	+16.0%	+14.4%	+43.6%
7/1/10-6/30/11	+30.4%	+32.9%	+30.7%	+35.8%
7/1/11-6/30/12	+5.2%	+5.4%	+3.9%	-21.8%
7/1/12-6/30/13	+18.9%	+17.8%	+20.6%	+42.2%
7/1/13-6/30/14	+15.5%	+31.2%	+24.6%	+26.7%
7/1/14-6/30/15	+7.2%	+14.6%	+7.4%	-4.5%
7/1/15-6/30/16	+4.5%	-1.6%	+4.0%	-30.0%
1/1/16-6/30/16	+4.3%	-2.6%	+3.8%	-17.7%
Annualized	+5.9%	+2.8%	+4.5%	+11.1%
Cumulative	+146.9%	+54.2%	+98.9%	+422.6%



PIF2 Investors:
A $100,000 investment in PIFI at inception on July 1, 1999 and rolled over into PIF2 on 12/31/02 ($197,900) was worth $732,100 as of June 30, 2016 (net to investors). This equates to an annualized return of 12.4% since inception – after all management fees and expenses. The best index over the same period was the Dow and an investment of $100,000 in the DJIA on July 1, 1999 was worth $244,400 on June 30, 2016 – an annualized gain of 5.4%. The Dow gains include reinvested dividends. In the graph above, the start date for PIF2 is shown as June 2000 for readability. The correct start date is October 2000.

PABRAI INVESTMENT FUND 3 (Offshore/IRA Investors) Performance Summary:

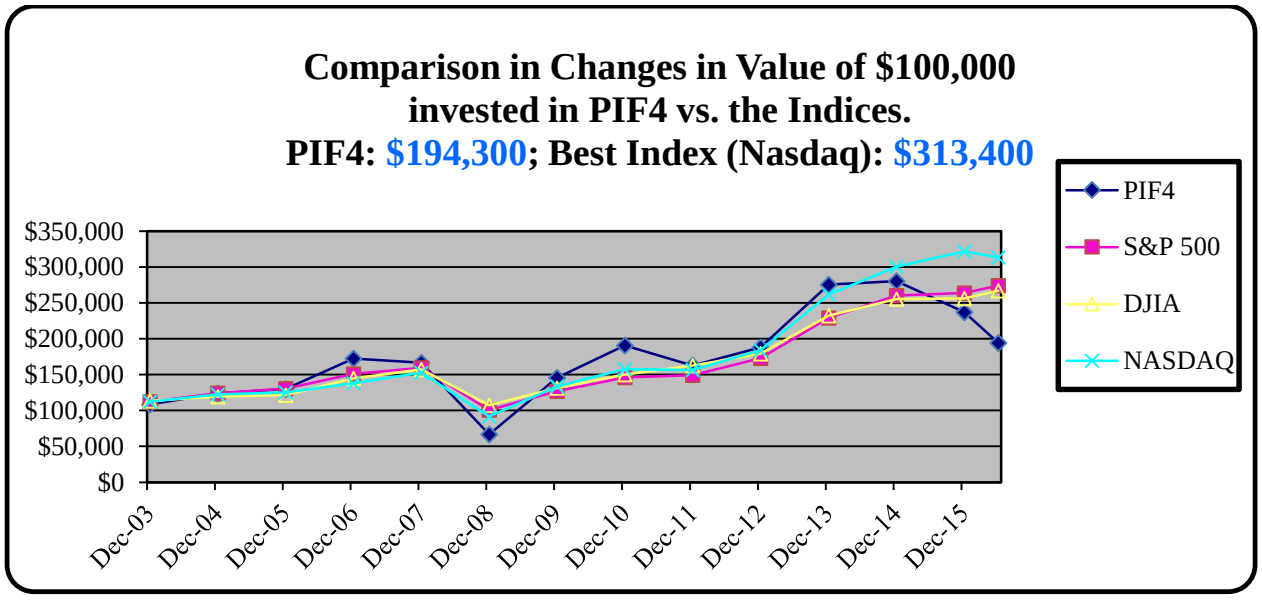
	DJIA	NASDAQ	S&P 500	PIF3 (net to investors)
2/1/02-12/31/02	-14.1%	-29.9%	-20.4%	-5.2%
1/1/03-12/31/03	+28.3%	+50.8%	+28.7%	+96.5%
1/1/04-12/31/04	+5.3%	+9.2%	+10.9%	+14.7%
1/1/05-12/31/05	+1.7%	+2.1%	+4.9%	-0.2%
1/1/06-12/31/06	+19.0%	+10.4%	+15.8%	+37.8%
1/1/07-12/31/07	+8.9%	+10.7%	+5.5%	-7.8%
1/1/08-12/31/08	-31.9%	-39.9%	-37.0%	-60.9%
1/1/09-12/31/09	+22.7%	+45.4%	+26.5%	+125.0%
1/1/10-12/31/10	+14.1%	+18.2%	+15.1%	+34.4%
1/1/11-12/31/11	+8.4%	-0.8%	+2.1%	-15.7%
1/1/12-12/31/12	+10.2%	+17.7%	+16.0%	+23.4%
1/1/13-12/31/13	+29.6%	+40.2%	+32.4%	+46.6%
1/1/14-12/31/14	+10.0%	+14.8%	+13.7%	+1.9%
1/1/15-12/31/15	+0.2%	+7.1%	+1.4%	-16.7%
1/1/16-6/30/16	+4.3%	-2.6%	+3.8%	-21.4%
Annualized	+6.8%	+7.7%	+6.5%	+8.5%
Cumulative	+159.2%	+191.7%	+148.5%	+224.9%



PIF3 Investors:
A $100,000 investment in PIF3 at inception on February 1, 2002 was worth $324,900 as of June 30, 2016 (net to investors). This equates to an annualized return of 8.5% since inception. The best index over the same period was the Nasdaq and an investment of $100,000 in the Nasdaq on February 1, 2002 was worth $291,700 on June 30, 2016 – an annualized gain of 7.7%. The Nasdaq gains include reinvested dividends. In the graph above, the start date for PIF3 is shown as December 31, 2001 for readability. The correct start date is Feb. 1, 2002.

PABRAI INVESTMENT FUND 4 (US Qualified Investors) Performance Summary:

	DJIA	NASDAQ	S&P 500	PIF4 (net to investors)
10/1/03-12/31/03	+13.4%	+12.3%	+12.2%	+8.4%
1/1/04-12/31/04	+5.3%	+9.2%	+10.9%	+14.4%
1/1/05-12/31/05	+1.7%	+2.1%	+4.9%	+4.9%
1/1/06-12/31/06	+19.0%	+10.4%	+15.8%	+32.4%
1/1/07-12/31/07	+8.9%	+10.7%	+5.5%	-3.4%
1/1/08-12/31/08	-31.9%	-39.9%	-37.0%	-60.0%
1/1/09-12/31/09	+22.7%	+45.4%	+26.5%	+118.8%
1/1/10-12/31/10	+14.1%	+18.2%	+15.1%	+30.7%
1/1/11-12/31/11	+8.4%	-0.8%	+2.1%	-14.8%
1/1/12-12/31/12	+10.2%	+17.7%	+16.0%	+16.1%
1/1/13-12/31/13	+29.6%	+40.2%	+32.4%	+46.0%
1/1/14-12/31/14	+10.0%	+14.8%	+13.7%	+1.8%
1/1/15-12/31/15	+0.2%	+7.1%	+1.4%	-15.4%
1/1/16-6/30/16	+4.3%	-2.6%	+3.8%	-18.1%
Annualized	+8.0%	+9.4%	+8.2%	+5.3%
Cumulative	+167.1%	+213.4%	+174.0%	+94.3%



PIF4 Investors:
A $100,000 investment in PIF4 at inception on October 1, 2003 was worth $194,300 as of June 30, 2016 (net to investors). This equates to an annualized gain of 5.3% since inception. The best index over the same period was the Nasdaq and an investment of $100,000 in the Nasdaq on October 1, 2003 was worth $313,400 on June 30, 2016 – an annualized gain of 9.4%. The Nasdaq gains include reinvested dividends. In the graph above, the start date for PIF4 is shown as Dec 31, 2003 for readability. The correct start date is Oct. 1, 2003.

General Comments

We are underperforming the indices in 2016. We are also lagging the indices for the last 1-year, 3-years and 5-years. While I have always ignored short-term results, our longer-term results should be a lot better. Why is this happening? The short answer is that I believe the current numbers are an aberration. Our two largest positions (Fiat Chrysler and GM Warrants) were valued at $290 million at the beginning of the year and on June 30 were changing hands at less than $204 million. They were significantly undervalued at year-end and more so on June 30. Had they stayed flat, our results would have been in line with the indices. We'll get back to General Motors and Fiat Chrysler shortly.

Now for a longer answer. If we look at Pabrai Funds over four periods:

1. From Inception in 1999 through June 30, 2007
2. July 1, 2007 through March 31, 2009
3. April 1, 2009 through March 31, 2014
4. April 1, 2014 through June 30, 2016.

A few salient observations can be made:

1. In the 1st period we delivered annualized returns of 29.4% versus 4.6% for the best index (Dow). And this was after fees. On a pre-fee basis, Pabrai Funds delivered well over 35% annualized.
2. The subsequent 21 months were dominated by the financial crisis. PIF2 declined by over 67% over this period, while the S&P 500 dropped by nearly 40%.
3. Over the next five years, from 2009 to 2014, PIF2 compounded at 33.7% a year after fees - beating the best index by over 11% a year.
4. In the last 27 months, while the S&P 500 has compounded at 7.4% a year, PIF2 has lost about 1/3 of its value. Half of this is from the unrealized paper loss on our GM and FCA positions. This gap is already narrowing. In the first two weeks of July the portfolio is up about 9% ($36 million) while the S&P 500 is up 3%. GM/FCA has done even better and has increased in value by nearly 13% since the end of June.

As an aside, I began my escapades as a value investor in 1994, when I first heard about Warren Buffett. I had about $1 million in "extra funds" and decided to put it in an Ameritrade account and see how well I could do using Buffett's value investing framework. From 1994 to 1999, that million compounded at north of 60% annualized (unaudited). Thank you Warren!

While the above data may not reflect it, I am a far better investor today than I was in 1994, 1999, 2007, 2009 or 2014. In investing, all knowledge is cumulative. As one understands the world and businesses better, one keeps improving. Every mistake and stumble helps one improve as well. As a result of the financial crisis, I made several changes/improvements including the checklist, position sizing and discussing potential and current investments with another investment manager. All have been very helpful – and our 2009-14 stellar results reflect these improvements.

In the fullness of time, when we extend the last period to be from 2014 to 2019 and beyond, I believe the results will also be quite stellar. We own some incredible assets. Our recent underperformance has been caused by a perfect storm of Horsehead's bankruptcy and deeply undervalued assets in the rest of the portfolio.

The currently underwhelming numbers may prompt some of our partners and investors to redeem some or all of their interest at year-end. That would be unfortunate as it will likely be an ill-timed exit. To help investors make a well-thought-through decision I would like to share more color on our portfolio. If they still choose to exit, I will feel better knowing that I have shared all the information I would have wanted shared if our positions were reversed. I have always shied away from discussing portfolio positions while we own the security for two reasons:

1. Commitment and Consistency Bias: By stating publicly why we own something, we make it harder to reverse ourselves in the future. It is better not to have this overhang on decision making.
2. We may make it harder to acquire more of the security as our enthusiasm may be shared by others.

Concern #2 does not apply to our two largest positions as I am not intending to buy more – and have not bought more for several years. Concern #1 is a concern, but outweighed in this case by other factors.

Appendix B has the detailed thesis on why we own Fiat Chrysler Automobiles common stock and General Motors Class B Warrants. The remaining portfolio is comprised of a variety of remarkable assets and businesses, including Google, Seritage Growth Properties, etc. While I expect the future returns from these holdings to be more than acceptable, I will refrain from any commentary on them at this time.

While the market is ascribing a value of $400 million to our holdings today, their intrinsic value exceeds $1 billion. We are likely to post triple-digit returns in the next 3-4 years. This is not the time to redeem.

I think it is important for all partners to read Appendix B (starting on Page 13). If you have any questions or comments on it, I'd welcome addressing them at one of the annual meetings. If you are unable to attend the annual meeting, please email me your question (mp@pabraifunds.com) and I'll try to answer it at one of the annual meetings. It will thus get included in the annual meeting transcript.

Do I Have Too Much to Do?

A couple of partners have raised concerns about the range of my activities (Dhandho, Dakshana, Pabrai Funds) and the amount of time I have available to dedicate to Pabrai Funds. It is a very fair question.

Investing is a strange discipline. One needs one's brain at unexpected times. It is an ideal activity for a gentleman of leisure. One can go about one's leisurely activities and when something interesting shows up, one can zoom in. I have always felt that if I zoomed in full-time on investing, it would lead to more activity and weaker results. It has always been helpful to have something else to burn the extra cycles.

From 1999 till 2001, in the very early days of Pabrai Funds, I used to play bridge 2-3 days a week at the local bridge club during business hours. Between the bridge, commuting and a leisurely lunch with my bridge partner, it took nearly 5-6 hours a day. Pabrai Funds had stellar returns during that period. And before that, from 1994 to 1999, I was running a 170-person company while managing my portfolio on the side.

In the 2007-2010 timeframe, when Dakshana was getting off the ground it did take a lot of my time. Startups are hard and time consuming. Today, Dakshana is on auto pilot. I probably spend less than an

hour a week on it. In looking back, I do not believe Dakshana affected Pabrai Funds negatively in any way. It again helped soak up extra cycles. In Q4 2008 and Q1 2009, I put nearly everything aside and went 400% into investment research mode. Bridge and non-investment reading went to zero. It was an exhilarating time.

Dhandho Holdings similarly did take considerable time and effort to get off the ground. At this point, my time spent on Dhandho is declining. I suspect it will continue to take up 10-20 hours a week for at least the next year or two.

None of this has negatively affected stock picking at Pabrai Funds. So far in 2016, I have made five new investments for Pabrai Funds and looked at and rejected countless others. There is synergy between Dhandho, Pabrai Funds and Stonetrust Insurance as they all need good investment ideas. The research into our Junoon ETF and related patent filing has helped Pabrai Funds in unexpected ways. Some of the analysis has added to my mental models. The knowledge and insights gained are priceless.

Warren Buffett has over 300,000 employees and 70+ CEOs reporting directly to him. And he plays 10+ hours a week of duplicate bridge. These activities help him burn extra cycles that might otherwise be mis-directed. He still found time to drill down and buy nearly 5% of Seritage Growth Properties for his personal account in 2015. Like virtually all his investments, I am sure he did all the analysis on Seritage himself.

Alignment of Interests

My immediate family has a stake of 230,592 units of PIF2, 8,417 units of PIF3, 980,833 units of PIF4; and about 33,000 units of PIF4 in a retirement account. In addition, the administrative team at Pabrai Funds owns about 1,300 units of PIF4 and about 5,900 units of PIF3 in various retirement accounts. The aggregate stake in Pabrai Funds of the Pabrai family and staff at Pabrai Funds is worth over $32 million.

Pabrai Funds charges no management fee, just performance fees – which are ¼ of the returns over 6% annualized (subject to high-water marks). I only get paid when you make money. When you win, I win. I am very bullish on the long-term future of Pabrai Funds – as demonstrated by my being the second largest investor in the funds. No performance fees were earned by the funds in Q2 2016.

My family and I have a $7 million investment in Dhandho Holdings, and have invested approximately $800,000 in the newly launched Dhandho Junoon ETF. Besides this, we have no other meaningful interests in any other mutual funds, hedge funds or private equity funds. Our interests are completely aligned.

Lecture at University of California, Irvine

On May 24, 2016, I gave a lecture at the University of California, Irvine's Paul Merage School of Business entitled "Mental Models Used for the Coca-Cola Investment by Berkshire Hathaway."

Here is the link to this event:

https://www.youtube.com/watch?v=jfxOvdiac94&feature=youtu.be

2016 Annual Meetings – Save the Date

There will be our two annual meetings held sequentially at Orange County, California & Chicago, Illinois. We are also adding a 3rd annual meeting at our Dhandho Holdings Corporation headquarters in Puerto Rico! The Puerto Rico meeting will be on September 24, 2016.

Prior to the California meeting on September 10, 2016, we will have the 3rd Annual Gran Fondo Dhandho Bike Ride. It's a scenic ride around the Newport Estuary with views of the Pacific Ocean in Newport Beach, California. Biking can be a dangerous activity; we only want folks who are decent bikers on the ride. The ride begins at Starbucks in Newport Beach at 8:15 AM, and ends there around 10:30 AM. For folks that just wanna chill, you can come to the Starbucks at 10:30 AM and hang out with us bikers. Here is a link to the Starbucks location:

http://www.starbucks.com/store/18175/us/jamboree-bristol/3601-jamboree-road-newport-beach-ca-926602961

The **California** meeting is scheduled to be on **Saturday, September 10th, 2016** at 4:00 PM at:

Soka University
Performing Arts Center
1 University Drive, Aliso Viejo, California 92656 Tel. +1949.480.4000

Soka University has a spectacular campus nestled in the scenic hills of Aliso Viejo. It is a 20-minute drive from Orange County Airport (SNA), and about an hour drive from LAX.

There is a fantastic Marriott Club Sport hotel about 3 miles from Soka University:

Marriott Renaissance ClubSport
50 Enterprise
Aliso Viejo, CA 92656
Reservations: 800-468-3571
Phone: 949-643-6700

There are many hotels in the area. Here is a link to other hotels near Soka University:

http://tinyurl.com/8dmevvu

The **Chicago** meeting is thus scheduled to be on **Saturday, Sept. 17th, 2016** at 4:00 PM at**:**

Carlucci's Restaurant
(The Auditorium)
6111 North River Road, Rosemont, Illinois 60018 Tel. +1847.518.0990

Carlucci's is a five-minute taxi ride away from O'Hare airport. The Marriott Suites O'Hare and The Westin O'Hare are both next to the restaurant. In addition, there are a plethora of hotels in the vicinity. Good deals on O'Hare hotels are usually available on the major travel-related websites.

The **Puerto Rico** meeting is scheduled to be on **Saturday, Sept. 24th, 2016** at 4:00 PM at:

The Bankers' Club
Banco Popular Building
206 Tetuan Street, San Juan, PR 00902

The Bankers' Club is on the top floor of the historic Banco Popular building in Old San Juan. This is the same building where Dhandho Holdings offices are located.

There is a fantastic hotel where we have secured a special rate of $185/night. This rate comes with a complimentary continental breakfast and a 15% discount on meals in the main restaurant, *Patio Negro*. The hotel is a 5-minute walk from the Banco Popular Building. Please mention "Dhandho Holdings" to get this rate.

Hotel El Convento:
100 Cristo Street
Old San Juan, PR 00901
Reservations: +1787.723.9020

Agenda:

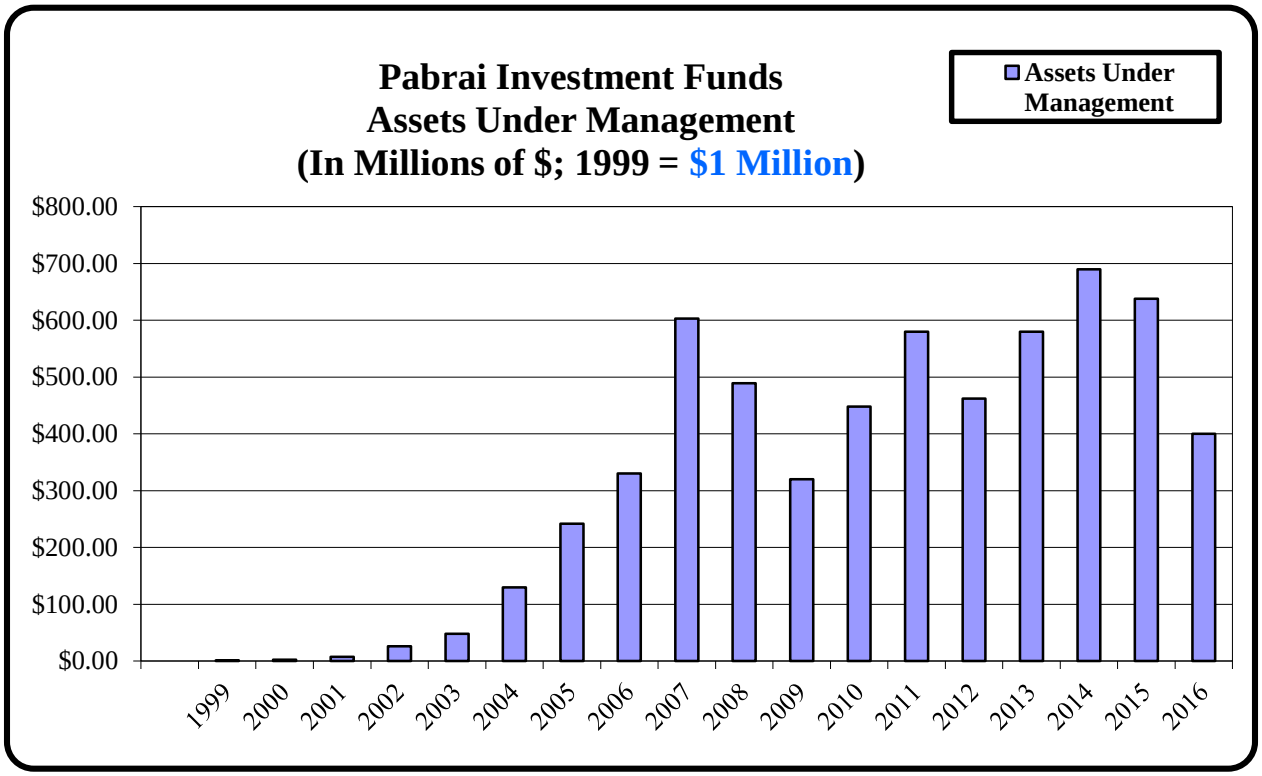
4:00 – 4:30 PM:	Meet and Greet
4:30 – 6:30 PM:	Presentation and Q&A
6:30 – 7:15 PM:	Cocktail Hour
7:15 PM:	Dinner (Chicago and Puerto Rico only)

In lieu of dinner this year in California, we're gonna do an extended cocktail hour with expanded appetizers (multiple food stations) and lots of tables to sit and chat. We'll see how it goes and then decide on the format for future years. It may be more fun this way.

The invites were sent in early July electronically via email. If you didn't receive it, please contact nickii_karen@pabraifunds.com. Your significant other and kids of all ages are welcome to attend. As we are a Registered Investment Advisor, the SEC requires that all guests other than family members must be "accredited investors." The invitation is non-transferable. I look forward to seeing you in September.

Assets Under Management

There is $400 million in assets under management between all the funds as of June 30, 2016.



Thanks for your continued interest, referrals and support. Feel free to call me at +1949.453.0609 or email me at mp@pabraifunds.com with any queries or comments.

Warmly,



Mohnish Pabrai

Note: Various indices are included throughout this letter for reference. Reference to an index or benchmark does not imply that the strategy will achieve returns, experience volatility, or have other results similar to the index. As an example, the Funds may invest in foreign securities or fixed income instruments; however the indices presented only include U.S. securities. These indices are purely a basket of stocks, and the Funds may invest in securities other than stocks such as bonds, warrants and preferred stocks. The Funds typically hold fewer than 10 positions as compared to 500 in the S&P, 30 in the DJIA, and thousands in the NASDAQ. Therefore, the Funds are significantly more concentrated than the benchmark indices and may experience notably higher volatility and return characteristics from these indices.

Copyright © 2016 by Mohnish Pabrai. All Rights Reserved. Please do not post this letter.

Appendix A

PIF2's Performance History (Net to Investors)

No. of Units	Date	PIF2 NAV
110,000	10/1/2000	$10.00
330,014	6/30/2001	$11.74
1,027,795	6/30/2002	$15.89
1,950,982	6/30/2003	$21.32
2,445,212	6/30/2004	$29.58
2,696,687	6/30/2005	$36.52
2,646,687	6/30/2006	$41.99
3,013,111	6/30/2007	$56.25
2,934,990	6/30/2008	$38.01
2,468,091	6/30/2009	$28.45
2,409,165	6/30/2010	$40.84
2,257,421	6/30/2011	$55.46
2,180,892	6/30/2012	$43.36
2,057,676	6/30/2013	$61.68
1,906,927	6/30/2014	$78.13
1,795,006	6/30/2015	$74.64
1,684,602	12/31/2015	$63.52
1,684,602	3/31/2016	$57.46
1,684,602	6/30/2016	$52.26

PIF3's Performance History (Net to Investors)

No. of Units	Date	PIF3 NAV
65,100	2/1/2002	$10.00
265,919	12/31/2002	$9.48
485,041	12/31/2003	$18.63
1,774,753	12/31/2004	$21.37
2,478,793	12/31/2005	$21.32
2,930,608	12/31/2006	$29.37
6,438,615	12/31/2007	$27.09
5,415,189	12/31/2008	$10.57
5,038,658	12/31/2009	$23.79
4,885,267	12/31/2010	$31.95
4,701,613	12/31/2011	$26.92
4,318,818	12/31/2012	$33.21
4,384,591	12/31/2013	$48.70
4,290,222	12/31/2014	$49.61
3,805,336	12/31/2015	$41.33
3,821,599	01/31/2016	$33.82
3,821,599	02/29/2016	$32.36
3,821,599	03/31/2016	$36.31
3,821,599	04/30/2016	$37.33
3,892,832	05/31/2016	$35.10
3,892,832	06/30/2016	$32.49

PIF4's Performance History (Net to Investors)

No. of Units	Date	PIF4 NAV
595,030	10/1/2003	$10.00
1,219,330	12/31/2003	$10.84
5,627,712	12/31/2004	$12.40
9,314,803	12/31/2005	$13.01
11,528,331	12/31/2006	$17.23
16,899,746	12/31/2007	$16.64
15,737,042	12/31/2008	$6.66
15,725,066	12/31/2009	$14.57
15,251,129	12/31/2010	$19.05
14,493,713	12/31/2011	$16.24
12,398,564	12/31/2012	$18.85
11,560,683	12/31/2013	$27.53
10,641,808	12/31/2014	$28.03
9,531,764	12/31/2015	$23.71
9,531,764	03/31/2016	$21.64
9,531,764	06/30/2016	$19.43

Appendix B

Our two largest positions are Fiat Chrysler Automobiles (FCAU) and General Motors Class B Warrants (GMWSB). We invested 10% of assets in each of these positions. Let's start with Fiat Chrysler.

Fiat Chrysler Automobiles (FCAU)

Fiat Chrysler Automobiles	
First Bought on:	6/18/2012 for $4.59/share
Avg. Buy Price:	$5.06/share
Total Amount Invested:	$69.6 million
Current Value (incl. spinoffs):	$152.4 million
Shares Owned:	13,758,000

In January 2016, Fiat Chrysler spun out Ferrari. We received 1,375,800 shares of Ferrari. As I pen this missive, these spun out shares are worth $59 million. In May 2016, Fiat Chrysler spun out RCS Media to shareholders. With no understanding of RCS Media, I sold the shares as soon as possible. We netted $0.6 million from this sale. Fully 86% of the amount we invested in Fiat Chrysler has already been returned to us in the form of Ferrari and RCS Media stock.

I have always hated the car business. And I have always hated the bloated, bureaucratic American auto manufacturers even more. They produced pathetic sub-par cars. Since graduating from college in 1986, I've only bought either Japanese or German imports. American auto manufacturers are unionized. It is an industry with very high capex. It takes many years and hundreds of millions of dollars to design and bring a car to market. And then if it does not perfectly match consumer tastes, it is all down the drain. It is also a brutally competitive industry where customers have lots of choices. The mix is toxic.

All of the above was true until May, 2012. That is when I began a detailed drill down on General Motors. I was prompted to take a closer look at GM because I noticed that GM was one of David Einhorn's largest positions (the other one was Apple). I found it peculiar that an investor like Einhorn would go all-in and invest in a terrible business like General Motors. But then I also noticed that Berkshire Hathaway had taken a position in GM. I guessed that it was likely Ted Weschler at Berkshire who was the GM buyer. Ted has done extremely well investing in the bankrupt chemical company, W. R. Grace. He had headed the equity committee during Grace's decade-long journey through Chapter 11 reorganization. GM had its own journey through Chapter 11 reorganization in 2009.

So, I asked myself, why would Einhorn and Weschler both buy GM? They have no other overlap in their portfolios. Both are very smart and thoughtful investors. And they both had to know that the industry sucked and GM sucked even more. I have learnt to pay attention to disconfirming

evidence from Darwin. Since I was twiddling my thumbs at the time, I decided to drill down on GM to try to answer that question. And very soon after I started drilling down on GM, I started reading *Overhaul* by Steve Rattner.

https://www.amazon.com/Overhaul-Insiders-Administrations-Emergency-Industry/dp/0547443218/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=1468009551&sr=8-1

And soon after reading Rattner's excellent book, my attention shifted to Fiat Chrysler. The pieces were coming together. GM looked good, but Fiat Chrysler looked just mind-blowing. The month I spent drilling down on Fiat Chrysler and GM has to be perhaps the most exciting month in my 22-year journey thus far as a value investor. I read more than twenty books on various facets of the auto industry, several annual reports, etc. I listened to many archived conference calls, saw many videos. I read many transcripts.

I was up till nearly 3 or 4 AM every night. And then I'd resume the next day. It was the only time I collaborated with three other close friends and investors to make sure I wasn't missing anything obvious. I kept sending them materials to read, books to order, etc. They had a hard time keeping up. Eventually all four of us invested. The whole thing was an incredible orgasmic experience. If I can have the same experience even just once a decade, it would be incredible.

By mid-June, it was clear that it was a no-brainer for Pabrai Funds to take a full sized 10% position in Fiat Chrysler. And the reason it was a no-brainer was because of the latticework of mental models, all working in the same direction. One plus one becomes eleven. Before we delve into these mental models, my core thesis is unchanged. The car business is a lousy business. But there was substantial money to be made by making a one-off investment to capture the large gap between price and intrinsic value. We entered in 2012, knowing fully well that we'd exit in a few years and likely not get such an opportunity to invest in this industry again.

1. Chapter 11 Reorganization – Shiny new Chrysler and GM

As part of the Chapter 11 reorganization, both GM and Chrysler were able to get rid of virtually all their legacy debt. In addition, their legacy healthcare obligations were exchanged for equity. The VEBA trust that was responsible for these legacy Chrysler retiree healthcare costs ended up with 55% ownership of Chrysler (FCA later purchased this interest for a song). Franchise laws make it virtually impossible for the auto manufacturers to shut down dealerships. During the Chapter 11 reorganization, thousands of redundant GM and Chrysler dealerships were history in a flash – with virtually no cash changing hands. Chrysler got rid of the loser Plymouth brand and GM got rid of Pontiac, Oldsmobile, Hummer and Saturn.

2. Labor, Unions and the Post-Restructuring Fiat Chrysler and General Motors

In 1984, the UAW successfully negotiated the "jobs bank" program. Under this program, if an auto worker was no longer needed and laid off, he/she continued to collect 85-95% of their pre-layoff wage – indefinitely! They not only collected wages, but also continued to accrue rich defined benefit pension benefits and were part of a "Rolls Royce" health care plan. For example, Viagra was covered under this plan and by 2006 GM was spending $17 million a year on Viagra alone.

If GM shut down a plant in St. Louis and laid off 1000 workers while at the same time expanding a plant in Kansas City, the St. Louis workers were not obliged to relocate. They could continue to draw nearly full pay while watching Jerry Springer at home. At the same time, GM would need to hire new workers for Kansas City. Labor ceased to be a variable cost. It is interesting to note that it took a quarter century after the creation of the jobs bank and the worst economic situation in over half a century to bring the mighty GM to its knees. Even with useless products and ultra-high labor costs, GM remained a viable business for a quarter century.

In 2009, for the first time in their history, the negotiations between the UAW and GM/Fiat Chrysler did not take place under the threat of a strike. The Obama Administration's auto task force, which was headed by Steve Rattner, simply told the Chrysler UAW negotiators that they could either accept the Government's draft of the new contract or see the company liquidated with zero union jobs.

The labor movement did a lot of good in the early days to set workplace safety standards and negotiate fair wages and benefits. But then blackmailing took hold, and we ended up with quite egregious contracts between the auto manufacturers and the UAW. The new UAW contract negotiated by Rattner & Co. was a joy to read. Beautiful prose. Here is some of what changed:

No more jobs bank
No more Viagra, Cialis, Levitra, etc. (It mentions these as one of the highlights!)
No vision insurance
No dental insurance
Meaningful medical co-pays were introduced

At Fiat Chrysler, entry level workers now get paid less than $16/hr. Even after ten years, their pay is capped at under $20/hr. The biggest changes are in pensions. All these new workers are now on 401(k) plans. These are defined contribution plans that the rest of humanity has had for decades. The defined benefit pensions only apply to the workers hired before 2007. In the case of Fiat Chrysler, out of 37,000 US workers, 45% are post-2007 hires with no pensions. And as the older work force keeps retiring and new hires replace them, the economics will keep getting better.

Detroit does have plenty of well-trained workers with a good work ethic. As a result, Midwestern auto plants are ultra productive. With these changes, Detroit has gone from being one of the worst places on the planet to build a car to one of the best. It has a great location in terms of the raw materials, supply chain and transport links throughout the country. If one makes a car in Mexico versus making one in Detroit, the difference in cost is just a few hundred dollars per car. And transportation from Mexico eats into that advantage. Every US auto plant in the Midwestern US is currently being run full out twenty-four hours a day, seven days a week with severely curtailed summer and Christmas shutdowns.

3. It is not about the Cost of Labor

All that stuff I just told you about the importance of competitive labor costs is not exactly true. Here is the next mental model. Labor costs matter, but not as much as we think. Labor costs weren't the biggest reason Detroit went under. BMW produces most of its cars in a country with perhaps the highest labor costs anywhere. In addition, trade union representatives sit on the boards of all major German manufacturers. They have a strong voice. In spite of that, BMW is insanely

profitable. And you're thinking, "Yes, but that's BMW – with the ability to premium price its awesome ultimate driving machines!"

Well, let's just take a look at Fiat Chrysler's financials. In 2015, NAFTA revenues were about $80 billion. There are about 50,000 unionized workers in the NAFTA region. We know Mexican wages are quite low, but even if we take an average of $50,000/worker and add in another $25,000/worker for benefits, the total is well under $4 billion or approximately 5% of revenues. FCA cars sell for an average transaction price (ATP) of around $33,000. Labor is just $1650 per car.

The BMW example and the $33,000 ATP versus the $1650 labor cost tell us that it is ultra-important to crank our great products that consumers are truly excited to purchase. Not products that the old Chrysler and GM produced that needed huge incentives to move off the dealer's lot. It wasn't the $4-6 billion in annual NAFTA labor costs that sunk Chrysler. It was them producing pathetic products that no one wanted to buy. It's the product, stupid!

Applying Munger inversion to the 5% of selling price being labor means that if the Chinese would like to take over the US car market they have a huge barrier. Let's assume Chinese labor costs are zero. And let's assume transportation from Guangzhou to Memphis is also zero. And let's say the Chinese in every way can clone the Jeep Wrangler except that they can't use the name Jeep or Wrangler. Would you buy the Wrangler for $35,000 from your Jeep dealer or some Chinese brand that looks the same with no history etc. for $33,250? This is the reason the car business is dominated by countries with some of the highest labor costs – Germany, Japan, South Korea, etc. Low cost labor is not going help a car manufacturer get market share or super normal profits. That is not how this game works.

For the first time in a long time, Detroit is producing awesome products. They have stopped losing share to the Koreans, Japanese or the Germans. To the contrary, FCA is taking market share from all of them.

4. Sergio Marchionne

If Sergio Marchionne wasn't running Fiat Chrysler, I am sure I'd have passed on it. Marchionne is one of the greatest leaders and managers of any business in any industry today. He'd easily make my Top 20 list of greatest CEOs of all time. Sergio has been a CEO of three companies in his career – Alusuisse, SGS and Fiat Chrysler. If one had invested $1 million in Alusuisse when he became CEO in 1996 and then kept moving those funds as Sergio moved, that $1 million would be worth north of $30 million today. And that includes twelve of those twenty years spent in the lousy car business – with zero prior experience in the auto industry. By 2019, when he intends to hang up his boots and study Theoretical Physics (yes, that's right!), that $1 million will likely have grown to over $100 million.

When Marchionne came to Fiat in 2004, it was on life support and almost bankrupt. It had cycled through three chairmen, five CEOs and three heads of Fiat Auto in the previous four years. He nursed it back to health and solid profits so that, in 2009, when the much larger Chrysler was nearly liquidated by the US government and the lights were about to be shut off in Detroit, he was there to pick up the pieces. And he negotiated the purchase with no cash going from Fiat to Chrysler's owners. If there is a better negotiator than Sergio on the planet, I am not aware of it.

There are several books, videos, articles, etc. that one can delve into to get a sense of the phenom that is Sergio. Here is a Harvard Business Review article from 2008:

https://hbr.org/2008/12/fiats-extreme-makeover

And here is a recent Harvard Business School Case Study on Sergio:

http://www.hbs.edu/faculty/Pages/item.aspx?num=48422

(The above needs to be bought for a modest fee from HBS).

Mondo Agnelli is a good read and a good primer on the Agnellis, Fiat and Sergio:

https://www.amazon.com/Mondo-Agnelli-Chrysler-Power-Dynasty/dp/1118018524/ref=sr_1_1?ie=UTF8&qid=1468022919&sr=8-1&keywords=mondo+agnelli+fiat+chrysler+and+the+power+of+a+dynasty

What are we to think when the CFO of Fiat Chrysler, Richard Palmer, casually mentions at an off-the-record dinner that, "I am ready to give my life for Sergio." When a UAW leader goes to tears upon mentioning Sergio's name, you know that we're not in Kansas anymore:

https://www.youtube.com/watch?v=cYxDDM65_mw

It would be an understatement to say that UAW leaders, the tens of thousands of Fiat Chrysler employees in Detroit, in Toledo, in Brazil, in Italy, the thousands of dealers, the parts vendors – all of them are madly in love with Sergio. I don't know whether they love him more or I do. I do not worry about electric cars, about ride-sharing services, about self-driven cars, about peak autos or about recessions. I worry about Sergio's Marlboro chain smoking habit. May god gift him a very long and healthy life. There are many capable leaders under him who could take over and do quite well. But they aren't Sergio. There is only one Sergio.

5. The Magical Sergio Marchionne/John Elkann Team

A few years back Michael Eisner (former CEO of Disney) wrote a wonderful book entitled *Working Together.*

https://www.amazon.com/Working-Together-Michael-D-Eisner/dp/0061732362/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=1468046596&sr=8-1

Michael Eisner was the CEO of Disney for twenty years. During the first ten years he hit the ball way out of the park. Disney delivered stellar results. That was when they produced *The Lion King, The Little Mermaid, Beauty and the Beast, Aladdin,* etc. During the last ten years his performance was useless. In the end, Eisner was ousted in a very bitter and public divorce with Disney. When he became CEO, the Disney board was torn between hiring him or Frank Wells. Frank solved their dilemma by offering to become President and work under Eisner. Ten years later Wells died in a helicopter crash. After Frank's death, Eisner tried very hard to replace him. Nothing worked. Folks came and went. And in some cases (like Mike Ovitz), Disney had to pay out a massive severance to get rid of them.

Eisner had a tremendous partnership with Wells. One plus one became eleven. So, he studied other great partnerships –like Buffett and Munger or the Home Depot founders, etc. He found that it was rare to get two souls to come together like Frank and him, or like Buffett and Munger. But when they do come together, magic happens.

I believe John Elkann (Chairman of FCA and the anointed leader of the Agnellis) and Sergio Marchionne are just such a dream team. I have met John several times - broken bread with him, taken long walks with him, etc. The highlight was going for a ride in his Ferrari – with yours truly driving. He is a class act. Elkann and Sergio could not be more different. And they could not be more aligned. It is a very important reason why we'll have magical results with Fiat Chrysler.

6. Jeep

In 2009, when Sergio took over, Chrysler was producing a quarter million Jeeps – and virtually all of them were sold in North America. In 2016, global Jeep sales will likely approach 1.5 million. And it is on pace to have volumes exceed 2 million units by 2018. Jeep has gone from five models produced in one country in 2009 to seven models produced in six countries on four continents. India will soon start producing Jeeps. And the Wagoneer and Grand Wagoneer will launch in the coming years to allow Jeep to play in the large SUV space after an absence of decades.

With its World War II legacy and seventy-five-year history, Jeep is an iconic global brand. In China the term people use for SUVs is Jeep. Like Xerox, Fedex or Kleenex. Products like the Wrangler have virtually zero competition. Folks who aspire to own a Wrangler see almost any other SUV as inferior. FCA does not break it out, but I am sure FCA nets over $4000 on average per Wrangler. And, on average every Jeep nets them north of $2500. The Chinese joint venture Jeeps are likely half of that. Let's say those are $1000/Jeep. In 2018, the Jeep business alone will likely generate pre-tax earnings of over $4 billion.

7. RAM Trucks and Commercial Vans

> *"When I dream of RAM trucks at night, I drool."*
>
> ***Sergio Marchionne***

The Chicken Tax is a 25% tariff that the United States has imposed since 1963 on light truck imports. As a result, there are virtually no light trucks imported into the United States. Toyota tried to get around this by setting up manufacturing in Texas, the truck capital of America. It did not help. After sixteen years, out of a 2.5-million-unit American market, the invincible Toyota has barely gotten to a double-digit market share. Ford, GM and RAM dominate the market. There is tremendous brand loyalty. Ford F-150 truck owners love their Fords as do RAM owners.

Under Sergio's leadership, even with this loyalty, RAM has wrestled market share from Ford and GM. Since 2009, RAM's US market share has doubled from 11% to 22%. Their Canadian performance is even better – going from 14% share to 30%!

RAM's global volume is slated to be 620,000 units in 2018. They print money on these with average profits of over $5000 per truck or commercial van. In addition, outside NAFTA, the Fiat commercial lineup does another 600,000 units a year.

The North American light truck market delivers margins that are similar to those of European luxury imports – and this oligopolistic business deserves to be valued along the lines of BMW, Audi, etc.

8. The Chrysler Pacifica and the Minivan Franchise

Minivan sales in the United States are expected to exceed 600,000 in 2016. FCA's share of that is likely to exceed 40% versus 31% last year. FCA has just launched the Chrysler Pacifica to much fanfare. It is likely to win a range of "Best xxx of the Year" awards. And in a few months the Pacifica plug-in hybrid will be released. It is the only plug-in minivan on the market.

The 250,000/year minivan franchise owned by FCA is another jewel in the crown. I suspect they make north of $3000-$4000 per minivan. This is a $0.7 to $1 billion a year cash generator.

9. The Sale of Magneti Marelli/Comau/Teksid

FCA owns three auto parts companies that have over $10 billion in annual sales. These are mostly stand-alone businesses that supply parts to all the major auto manufacturers globally. There have been rumors that FCA has received offers for these businesses from private equity firms of $2.7 billion. FCA is said to have rebuffed these offers as too low. Marchionne has hinted that these businesses may eventually be sold. In June 2015, Marchionne named Pietro Gorlier as CEO of Marelli. Unlike other auto parts companies, Marelli has had very low margins – less than 3%. Born in Turin, Italy, Pietro is a battle-tested Fiat executive. After Pietro's arrival, margins have begun an upward trajectory and are now at 3.8%.

Sergio is an operator. He has no desire to run a 4% operating margin business. I suspect Pietro will work to raise these margins to 5% or more. A Marelli sale in 2-3 years may net the company something north of $4 billion. The entire market cap of FCA is less than $8.5 billion. Marchionne has also wanted to hang on to Marelli for a bit because Maserati, Alfa Romeo, etc. are leveraging their considerable engineering expertise on some of their upcoming models.

10. Maserati & Alfa Romeo

FCA just released the first SUV from Maserati, the Levante. It has been well received and will likely be another money spinner. With 50,000 Maseratis a year in 2018 and beyond, this is a $250 million/year cash generator. Alfa is a story for 2020 and beyond.

Now let's look at some potential headwinds:

1. Electric Cars

My family bought a Nissan Leaf all-electric car in 2011. And I have had a Cadillac ELR (the Cadillac version of the Chevy Volt) since 2014. I love electric cars – especially the ELR. They are

here to stay. However, the best that I can tell, electric cars present no meaningful threat to our GM or FCA investments (in the timeframes that we are likely to own these stocks).

Tesla does make awesome cars and Elon is singly responsible for changing the trajectory of electric cars going mainstream globally. I love Elon. He is a one-in-a-billion human being. But virtually every innovation Elon comes up with will be cloned by the industry quite quickly. In fact, the Bolt is GM's first response to the Tesla Model 3 and it will be shipping in high volume at least a year or two before the Model 3. And it will cost less than the Model 3. And you can still get the $7500 federal tax credit with GM's Bolt, but not with the Model 3. In the next five years, I expect there to be at least ten Model 3 clones on the market.

Electric cars are no different from Internal Combustion Engine (ICE) cars from a business economics perspective. Electric cars share all the other negatives of the car business: high capital expenditures and dependency on consumer tastes. Eventually Tesla's workforce is going to be unionized. The UAW is already sniffing around its Fremont plant.

Some of Musk's ideas, like his super charger network or the ill-fated attempt to swap out batteries, are simply a waste of capital. That would be like GM or Ford building out thousands of gas stations throughout the country in the 1930s because automobiles need gasoline. Tesla's cars go over 200 miles on a single charge. That is more than enough for 99+% of usage as the cars can simply be charged at night at home. And even if a public charger network is needed, capitalism works and folks will step in to build those out – or owners of existing gas stations will install charging stations as well. Secondly, when we look for a gas station most of us aren't willing to detour even by a mile to fill up. Even when the Tesla super-charger network is fully built out, the detour is several miles and charging time is significantly higher than filling gas.

The Gigafactory is another dumb idea. Tesla is blowing billions on it. GM has its own battery Gigafactory in South Korea. It just happens to be owned by GM's battery partner, LG Electronics. All the capex is on LG. The Chevy Bolt's per kW battery costs are already less than Tesla's. The Chevy Bolt will be out in a few months and GM will have a very hard time keeping up with demand for this practical 200+ mile range pure electric car.

Tesla has lost billions so far. And it will continue to lose billions for years. These are not start-up losses. Every Tesla that leaves the factory has more than $10,000 stapled to it. It is a negative operating margin business. This is why Sergio scratches his head each time he looks at Tesla.

Fiat has had an electric car in its lineup for years – the Fiat 500E. It is soon going to have a plug-in hybrid (Chrysler Pacifica) as well and Sergio has said that if Tesla is able to make money on a $35,000 Model 3, he will have a clone of it (with Italian flair and styling) in the market within a year. I would not bet against Sergio. Elon Musk's modus operandi is to over-promise on delivery dates and product price. He usually blows them by years and tens of thousands of dollars. Tesla ain't gonna have no $35,000 anything till at least 2020 - or maybe never.

Even if Tesla is very successful and eventually sells hundreds of thousands of cars profitably every year, it is not a threat to FCA for a long time. FCA makes its money on Jeeps, RAMs and minivans. Tesla has no products that compete head to head with any of the main FCA or GM cash gushers. It is actually the other way around. GM, Ford and FCA will all clone the Tesla lineup and capture

share. There is nothing Tesla has (other than the direct selling model) that the Big Three, Germans, Japanese and Koreans cannot clone.

Bottom Line: It isn't going to be electric cars that derail our FCA thesis.

2. Driverless Cars

> ***"****A level-five vehicle, which is, you get into your car, you hit a button, you go to sleep and you wake up at grandma's house, that is a long way away—15, 20 years.****"***
>
> ***Mark Fields, CEO, Ford Motor Company***
> *(quoted in the Wall Street Journal, April 21, 2016)*

The Tesla-style autonomous driving that only works on highways is reality today. We will see virtually every car manufacturer introduce such "autonomous highway driving" cars within two years. That feature is a blessing for drivers. However, such a feature has no negative impact on car volumes. If anything, it may pull in demand as folks buy these cars in droves.

Driverless cars will have an impact on car volumes, but only after they are 100% autonomous. That is, I open my Uber app, pick the kind of car I want and it shows up in five minutes. After it drops me off, it goes on to pick up the next customer. And all of this happens with no driver at the wheel. Going from autonomous highway driving to Driverless Ubers is a huge leap. It is far easier to get from 0% to 99% autonomous than it is to get from 99% to 99.99% autonomous. The last mile at both ends is very hard. The engineering problems that need to be solved to get to 99.99% are daunting. Mark Fields is right.

Recently, a Tesla being driven autonomously (while the driver was watching a Harry Potter DVD) had its first fatality. The car was totaled and the driver died instantly. The car "did not see" a giant tractor trailer making a legal left turn and slammed into it at 65 miles per hour. Mobileye, the company whose technology Tesla uses for autonomous driving, subsequently stated that "lateral vehicle detection" is a feature that will be available in 2018. In other words, Teslas will not be able to avoid the type of collision that just occurred for two more years.

But let's ignore Mark Fields and Mobileye, etc. Let's assume we have 100% driverless cars available to be bought in 2017. How would it affect FCA and GM? The primary way it affects FCA and GM is if these driverless cars are not bought, but rather used as Driverless Ubers. The entire US car and light truck fleet is 255 million. Of this about 183 million is passenger cars and light trucks. A family with 2-3 cars may decide they can get by with fewer owned cars. Let's say that this 183 million passenger car fleet declines to 100 million cars.

While individual car ownership will drop in a driverless world, there is no question that total miles traveled by the entire US car fleet every year will skyrocket. This is bound to happen because:

1. If you summon a car to take you to work, there are miles driven to get to you. These are incremental miles.

2. The cost/mile of traveling in such a Driverless Uber will plummet. For example, if I take an UberX from my home to LAX (which is 45 miles away), it costs around $65. The bulk of this cost is driver labor. A Driverless Uber may cost $15 or less for the same ride. Rides around town may be less than $2. This is a brand new paradigm and we will see miles traveled by humans increase quite significantly. Public transport usage will drop. Uber and Lyft did not just take market share from cabs and limos. They have dramatically increased total miles traveled by humans. And they have done so while being rather expensive. Driverless Ubers may be even less expensive than some public transport options.

3. Driverless cars mean humans may take longer and more frequent road trips or live further away and be able to afford to live in better dwellings. And they can sleep or do other things while commuting. All of these will significantly increase per capita miles traveled.

4. A private car driven 15,000 miles a year may last for 15 years before being scrapped. A driverless car may be doing 60,000 miles a year. It might last just 4-5 years. Instead of the average car being eleven years old (as is the case now), it may drop to eight years. The 17 million autos sold in the United States every year could actually rise significantly.

5. In places like India and China, one has to be doing really well to afford to buy a car. Only about 8% of Chinese can even afford to own a car. In India that number is less than 3%. But when folks can ride in driverless cars for $1/10^{th}$ or less of the effective cost of owning a car, demand will skyrocket. Outside the United States, driverless cars will be even harder to implement. If and when the formidable engineering challenges are overcome, demand for vehicles in these geographies will be enormous.

The Bottom Line: The total number of automobiles sold globally may rise significantly in a driverless world. First, it ain't happenin' for 15+ years. Second, it likely provides tailwinds whenever it happens.

3. Shared Ride Cars

Services like UberPool have two impacts:

1. They lead to fewer miles driven as folks share rides.
2. They significantly reduce the cost per ride while increasing mobility options, leading to increased demand.

It is hard to tell what the cumulative impact of the above is. They might cancel each other out or be a net negative or a net positive. We need to keep in mind that both driverless Ubers and UberPool only work well in dense urban settings (take a look at RideWithVia.com). Both GM and FCA make most of their money from sales in rural America. The segment most affected by this is regular passenger cars. That is not where GM and FCA make their money.

4. Automobile sales have peaked

In 2015, automobile sales set an all-time record of 17.5 million cars and light trucks. The previous record was 17.4 million set in 2000. Markets are very jittery that automobile sales have hit a peak and are on their way down.

In the year 2000, the population of the United States was 282 million. Today it is over 324 million. There are 42 million more people in the United States today than there were in 2000. In 2000, the total US fleet had 219 million vehicles versus 255 million today. The car fleet has increased in lockstep with population growth. The population of the United States is expected to continue to grow. And, until driverless cars go mainstream, the total fleet size will continue to rise.

Recessions do put a damper on auto sales. In 2009, when sales dropped precipitously to 10 million units, the national fleet continued to age. As a result, we had a relatively quick increase to the present 17.5 million units. At 11.5 years, the US auto fleet is the oldest it has ever been. This puts pressure to scrap those clunkers. Of course, new car sales need a healthy economy. We have had an anemic recovery and wages have stagnated. But people do need to replace worn out cars. The result is that we are seeing a lot more leases, more sub-prime auto lending and stretched out loan payback periods.

It is also important to note that housing and construction are key drivers of auto sales. Housing starts have also remained anemic. Much of the pre-financial crisis over-building has been absorbed. At some point construction will return to more normal levels. The most likely scenario is that US auto sales will stay at a 16-18 million units/year plateau for some time.

GM and FCA are global companies. While we hit rock bottom in auto sales in 2009, Europe hit its bottom in 2013. Since then industry volumes are up sharply. The four major regions in the world where FCA does business are each in a different situation:

NAFTA:	Multi-year Plateau
EMEA:	Rising. May get back to normal volumes in 2-3 years.
LATAM:	Falling. It may bottom in 2017 and then rise substantially.
CHINA:	Falling, but FCA has no volumes here. Jeep will be huge in China. Pure upside.

The bottom line is as long as the US and Europe muddle along, car sales aren't going to fall off a cliff. If we go into a recession, volumes will drop. How much they drop is a function of how bad things get.

5. Recalls and Product Liability

This is a real risk with all the automobile manufacturers. As we have seen with VW and Dieselgate, things can get very ugly. The auto manufacturers aren't manufacturers anymore (that is why labor costs are so low as a percentage of sales). They are assemblers. If there were to be a large liability stemming from a vehicle defect, there is a decent chance FCA and GM could pass much of it along to the part supplier. I am hopeful that after the ignition key issue at GM there has been real culture change. At FCA, it may be wishful thinking, but I hope Sergio has had an impact on the rank and file to "do the right thing."

GM is a $10 billion a year cash generator and FCA is soon going to be a $6+ billion money spinner. I am hopeful that any issues that arise are a small fraction of these cash flows.

6. Gas and Commodity Prices

There is no question that low fuel prices are partly responsible for the current American love affair with SUVs and trucks. However, there have also been tremendous gains in fuel economy over the years. The popular 2016 RAM 1500 is rated to get 29 mpg on the highway and 21 with city driving. Ten years ago the same truck delivered 21 highway/16 city mpg. We aren't done yet. These numbers are going to keep getting better. Eventually hybrid electrification technologies are going to make it onto trucks – making these numbers even better. My Cadillac ELR averages 136 mpg.

Another important sea change is that oil reserves in the United States, for the first time *ever* exceed those of Saudi Arabia and Russia. Please read that last sentence again. And with the very significant technological improvements, the cost to get at these reserves has been dropping at spectacular rates. The best book I have read on the subject is *The Green and The Black* by Gary Sernovitz. Gary is a gifted (and quite funny) writer and a veteran investor in the oil industry. Highly recommended!

https://www.amazon.com/Green-Black-Complete-Revolution-Fracking/dp/1250080665/ref=sr_1_1?ie=UTF8&qid=1468478518&sr=8-1&keywords=the+green+and+the+black

The shale revolution in the United States is a seismic event and a huge positive for the United States. It not only helps our GM/FCA thesis, but is great for mankind. Oil prices are very hard to predict, but if they go over $60/barrel for any sustained period of time, we will see oil production in the United States skyrocket. The odds that oil prices average out under $60/barrel over the next ten years is a lot higher than the reverse. The bottom line is that oil prices are unlikely to rise in the near future. If they do, their negative impact on auto sales will be partially offset by the new fuel sipping engines they now sport.

Commodity prices have collapsed. Steel and aluminum prices are at a multi-year low, as is the price of natural gas. All of these are big ticket items for the auto manufacturers – and they are getting tail winds as a result. However there is a significant lag with the supply chain for low commodity prices to flow through in parts prices. The auto OEMs have yet to fully realize all the benefits of these low prices. They will continue to benefit from them through 2016 and into 2017. However, while their costs are dropping, car and truck prices are rising. For all the aforementioned reasons, GM and FCA do have some pricing power – and they are using it.

We will see reduced profits when commodity prices rise (again with a lag). Similarly, rising interest rates are a headwind for car sales. However, it is likely that both will happen when the economy is creating more jobs and more higher-paying jobs. More prosperity means more car sales. Anything can happen, but it is hard to see commodity prices and interest rates skyrocketing before 2020 while job growth stagnates.

What is it all worth?

To be conservative, let's ascribe zero value to the Fiat 500, Alfa Romeo and all the various other minor brands in the portfolio. Here is a sum of the parts' pretax cash flows in 2018:

Jeep:	$4 billion
RAM:	$3 billion
Fiat Comm.:	$1.5 billion
Minivans:	$0.75 billion
Maserati:	$0.25 billion
Parts:	$0.5 billion
Total:	**$10 billion**

On an after-tax basis this is $7 billion. Sergio's own guidance is for $5.2 to $6 billion. I believe his numbers are conservative and will be revised upward. By 2018, the company will have over $5 billion in net cash. If they have sold Marelli by then, they may have $9-10 billion in net cash. If they do generate $7 billion ($5.40/share) in cash flow in 2018, the market cap will likely be north of $35 billion ($27/share). It is less than $8.5 billion today. A business that generates $5-7 billion in cash flow is not going to change hands at $8 billion.

And if they execute a transaction with GM or someone else, it may be well above that. A GM-FCA merger would increase cash flows by over $10 billion annually in the combined entity. Those savings have a value of greater than $50 billion. Even if FCA shareholders captured 30% of the added value, the post-deal FCA market cap may exceed $50 billion or $39/share.

What if the shares are languishing at a P/E of 4 or less in 2018? FCA can also simply put $2-3 billion every year into share buybacks in 2019 and beyond. The value accretion to the remaining shareholders of such an action would be huge.

Because FCA started its journey with lots of debt and leverage, they have not been able to capture the economics of having a fully captive global financing arm. These captive finance arms, if run prudently, are amazing businesses. By the mid to late 20s, such a captive financing business could be generating $1-2 billion in annual free cash flows at FCA. These cash flows aren't cyclical and deserve a double digit multiple. Alfa Romeo is also a next decade story. Alfa could be worth billions by 2025. We are likely to either fully exit or sell most of our stake in 2-3 years. There is a good chance that even at $27/share we may have sold too early and left a lot of money on the table.

General Motors Class B Warrants (GMWSB)

General Motors Class B Warrants*	
First Bought on:	6/11/2012
Avg. Buy Price:	$10.08/warrant
Total Amount Invested:	$60.2 million
Current Value:	$77.7 million
Number of Warrants Owned:	5,973,053

*Pabrai Funds initially bought GM stock as our docs did not allow investing in warrants in two out of the three funds. The partners approved an amendment allowing investing in warrants. We sold all the GM stock (at a $15.2 million profit) and invested all the proceeds in the warrants. The above numbers are the net amount invested in GM Class B warrants.

The thesis for General Motors is quite similar to Fiat Chrysler. There are a few important differences that I'll highlight here.

1. The GM Class B Warrants

As part of the 2009 GM bailout, the US Government was issued Class B warrants by GM. The terms for these warrants are similar to the TARP warrants (except for price adjustment for dividends). The documents were authored by Uncle Sam and GM was told where to sign. These 10-year warrants were issued in 2009 and expire in July 2019. Each warrant entitles the holder to exchange the warrant and $18.33 for one share of GM stock. The warrants also allow for a cashless exercise. They can be put to the company and exchanged for shares. Once these exchanged shares are held for a year, they become subject to favorable long-term capital gains tax treatment. The exchange itself is tax free.

We have three more years left on these warrants. If GM stock has not hit our price targets and I am still bullish, I intend to convert the warrants to stock in early 2019. In 2012, no investment bank would have given us a seven-year call option on GM at the modest premium at which we could get the same through the warrants.

2. Share Buybacks

GM has publicly stated that it will return all cash over $20 billion to shareholders. In 2016, GM's free cash flow is slated to exceed $8 billion. After annual dividends of $2.4 billion, there is over $5 billion left over for stock buybacks. With a market cap of less than $50 billion, GM can retire a massive amount of shares in short order.

GM's cash flows are likely to exceed $10 billion as soon as 2017. Let's assume GM does the following buybacks:

2016:	$5 billion	@	$35/share
2017:	$7 billion	@	$40/share
2018:	$7 billion	@	$45/share
2019:	$7 billion	@	$50/share

Total Buybacks: 613 million shares

Shares Outstanding in 2020: **~927 million**

Let's use a round number of 950 million shares outstanding. If the business is still generating $10 billion a year, a $70 billion market cap is not out of line, giving us a price/share of $74. At that $74 share price, the warrants are worth around $55, giving us a 5.5x return.

What if the stock market cap did not change? What if it remained stuck at $50 billion? GM would retire over half its shares in this scenario. With less than 800 million shares outstanding, the stock price would be $65/share and our warrants would deliver a 4x return. Heads, we win and Tails, we win.

The skeptic is still not convinced. What if GM's stock price never changes? What if it languishes at $30? Well, in that case, if GM does not raise its per share dividend, the amount available for buybacks from 2016-19 would be over $27 billion. Shares outstanding at the end of 2019 would be less than 650 million. The company would be trading at a P/E of 2. And if GM raises its dividend to keep the same payout, the dividend yield would be 13%. As long as the cash flows are there, the shares are not going to be changing hands at $30 in 2020.

Let's take a look at why the $10 billion/year cash flow number is actually too low.

3. GM Financial: An Awesome Business

The captive auto finance business is an awesome, awesome business. In 2005, when Ford's car operations lost $4 billion, Ford Credit made $6 billion. In fact, other than 2008, I could not find a year when Ford Credit lost money. It is a consistent multi-billion-dollar money spinner. Even the 2008 losses were fully offset in 2009, when Ford Credit reported nearly $2 billion in profit. GM's old captive, GMAC, went wild and crazy during the housing bubble. They bet heavily on mortgages and real estate in the 2004-07 timeframe – and paid the price for their folly.

GM began rebuilding its captive finance business, now called GM Finance, in 2010. It is heavily focused on GM products. There ain't gonna be no real estate escapades for GM Finance anytime soon. Cash flows are nearing $1 billion a year already and the company has guided to over $2 billion in cash flows by 2018. This business deserves a healthy double digit multiple. Just GM Finance and GM China are worth the entire market cap of GM. The rest of GM is free!

When households face severe financial stress, they max out their credit cards and then stop paying their mortgage and credit card bills. They keep current on their auto loans because technology now allows lenders to disable cars remotely. The car will not start until payments are made current again. With hidden GPS devices installed in these cars, they can also repossess cars quite quickly. Sub-prime lending is a small part of GM Financial's business. They have seen no trend of rising defaults in that segment. There are fantastic sub-prime lenders like Credit Acceptance who are very profitable and have never lost money – including during the financial crisis. Bottom line: I do not believe any large sub-prime lending write downs are in the cards for GM.

The captives have advantages that other auto lenders do not. They can "re-certify" and re-warranty repossessed cars before reselling them. Their dealer network allows them to repair anything. And when a car comes off lease, they can decide whether to auction it off, move it to another part of the country or whether to market it as a GM Certified Pre-owned car with a GM warranty.

4. GM's Free Cash Flow

Last year GM's North American EBIT margin was 10.5%. They had a goal of getting to 10% margins by 2016. They got there a year earlier. They have a goal of global EBIT margins of 9-10% by early in the next decade. GM's consolidated revenue is $155 billion. This will grow. For example, Cadillac alone is slated to go from being a $13 billion global business to a $25 billion business.

If GM's revenues are $165 billion in 2018 and they make 8.0% on this, that is around $13.2 billion. GM Financial will deliver $2 billion by 2018. And GM's China joint ventures reliably deliver $2 billion a year to GM today. That number will grow. Then we have the $45.4 billion NOL tax shield that GM can use to write much smaller checks to Uncle Sam in the future. At the end of 2015, GM still had over $36 billion of deferred tax assets on its balance sheet. In 2015, GM paid no federal income taxes. Income taxes are expected to be muted for several years. With $20 billion in net cash, GM's net interest expense annually approaches zero.

Pre-tax cash flows in 2018 are estimated to be over $17 billion. Even ignoring the tax shield, free cash flow is north of $12 billion. And this $12 billion is quite recurring. Like FCA, they have very strong franchises in light trucks, large SUVs, Cadillac, China (#1 market share) and GM Financial.

What if GM and FCA merge? If GM kept 70% of the benefit, after-tax free cash flows would be $17 billion. Those buybacks would just go exponential. The stock would exceed $100/share.

The bottom line is that in 2019, our warrants could be changing hands at four times the present price. Excluding Ferrari, our GMWSB and FCA investments are presently valued at $161 million by Mr. Market. They will likely be valued at more than $600 million in a few years. And what could the remaining $250 million be worth? We have some stellar undervalued holdings. Even if the rest went up by 50%, our assets would be around $1 billion versus $400 million today.

Past performance is not indicative of future results. Returns are presented net of all fees and expenses, include the reinvestment of income and are calculated using a simple rate of return. The securities discussed do not represent all securities recommended for the Funds. It is also not a recommendation to buy or sell and one should not presume they will be profitable.

Please be aware that our past newsletters may discuss specific securities that have performed well without necessarily addressing those that have underperformed within our Fund(s). Readers should not infer that all investment decisions within the Funds were profitable.