PENSERRA

VOLUME 18— PAGE 1

JUNE 30, 2017

AFTER HOURS QUARTERLY

TM: Planning the Move to Passive

INSIDE THIS ISSUE:

As featured in a recent Pension & Investment article "Passive shift a boon for transition management" that Penserra was featured in, Plan Sponsors have been busy de-risking and reducing costs by moving into passively managed strategies. Several of the potential reasons for the moves are related to reallocation of risk budgets to alternative investment styles and asset classes and controlling for costs in the form of asset management fees.

In the following we would like to share a few thoughts and considerations. In particular when plan sponsors are researching a structural change to their investment style and are moving to a mainly passive strategy.

Achieving benchmark returns through low-cost passive solutions is a major motivator to implementing a passive approach. In comparing active versus passive asset management fees, significant cost savings at the overall plan level are realized. Depending on the fees of the legacy strategy this can range between 20 bps to 60 bps annually. The savings, however, can also be quickly eroded if the project management and timing is not meticulously planned. When transitioning assets into passive structures, besides solely considering implicit and explicit costs, additional considerations should be given to aspects that can influence performance of assets while in transition. Some of the examples are: Transfer fees imposed by the custodian, stamp duties that may be imposed when there is a change of beneficial ownership, performance impact related to out of market exposure due to funding guidelines at the target manager. Many times these costs can be "hidden" versus shown as explicit transaction costs for cash contributions at the target manager.

Working with a provider that understands the entire investment process and intricacies of the respective operating models encountered during a transition is crucial in discovering the complete impact of a passive investment decision to make a move. Oftentimes, a provider will focus on the transition implementation costs that they feel are within their control, while not alerting customers to cost and performance implications that may transpire at the periphery of the transition. Yet those costs, depending on the circumstances, can be substantial in relation to the size of the investment.

Engaging an experienced provider in all facets of transition management will lead to a more informed decision. As the industry matures and experienced individuals are being replaced with less seasoned professionals, institutional knowledge is lost and in some cases not replaced. When trading costs are low as they are now, more emphasis should be given to other less talked about cost components. It is true that many of these costs are unavoidable.

However, the team at Penserra has a deep understanding in both asset and transition management to anticipate and plan for these.

TM: Planning the Move to Passive (cont.)

This experience is acquired only over years of providing comprehensive cost analyses and innovative solutions in this space.

Link to Pension & Investment article:

http://www.pionline.com/article/20170612/PRINT/306129977/passive-shift-a-boon-for-transition-management

For additional information please contact transitions@penserra.com or 1-855-736-7377.

Index: We've Come a Long Way

I remember back in 2000 it was the very early days of iShares and of ETFs themselves. Sure, SPY had been around since 1993 and my employer BGI (now part of Blackrock) had been managing WEBS funds since 1996, but the rebranding of WEBS to iShares and the massive effort put into the ETF initiative would really usher in the explosion of ETFs and their relevance. I was a young portfolio manager at the time and had cut my teeth managing separate accounts and commingled funds for some of the firm's institutional clients. I would soon get involved in the management of the iShares funds and was amazed at the complexity and elegance of the products.

I was thinking recently about the contrast between BGI's business development as an index fund manager and how things have evolved for us at Penserra. BGI had started managing index funds for traditional institutional investors in separate accounts and commingled funds and later moved into ETFs as a strategy to bring index investing to a broader audience. Penserra, by contrast, has started by managing index funds in the ETF wrapper and is now moving into the separate account and commingled space to service our institutional client base. It's not exactly the same, as BGI (Blackrock) has been a sponsor of their own ETFs and controlled the distribution along with the fund management, but I can't help but compare the development as an index manager.

Back in those early days of managing index funds in the ETF vehicle we were not just learning as we went, but in many ways inventing how it was supposed to work as we went along. Much of the investment process was the same as it was every bit as important to stay on top of index changes, corporate actions, cash levels and market structure issues. What was interesting was how managing ETFs used all of the knowledge and experience I had gained and then introduced a number of new and additional aspects of fund management. Not only did we manage the fund, but also the creation/redemption basket which is so important to an ETF. Managing the fund for tax efficiency took on a new level of importance as did managing for liquidity.

Over the years I would go on to help build whole new ETF businesses at places like Northern Trust and Charles Schwab. I have continued to learn and have always enjoyed staying on top of industry developments and best practices ways of doing things. Both indexing and an appreciation of it as an investment discipline have come a long way. I remember back at the beginning of my career seeing an article in the Wall Street Journal that essentially compared index fund management to something a monkey could do. I think most investors today understand and appreciate how complicated and challenging it is to do it well. I'm grateful for the opportunity we have had at Penserra to start our asset management business by running index funds in the ETF vehicle.

Index: We've Come a Long Way (cont.)

We have been able to develop infrastructure, corporate governance and investment process capable of supporting index fund management across many different asset classes and now look forward to delivering that service to our institutional investors in separate account and commingled fund vehicles where appropriate.

Two of the most powerful forces in investing have been the growth of passive investing and the growth of the ETF vehicle. Many of our team members have been fortunate to be involved in both of these trends since the early days and we are excited about what lies ahead as we continue to build our own business focused on helping our clients be successful in this space.

For additional information please contact Dustin.Lewellyn@penserra.com or 1-800-456-8850.

Capital Markets : Investment Grade Debt

While 2Q 2017 Investment Grade issuance exceeded $300bn in total, the quarter ended with domestic IG issuers quietly stepping to the sidelines, a result of conflicting comments by central bankers on their economies and outlook for interest rates. While the 10-year US Treasury began and ended the quarter nearly unchanged (2.32% on 4/3/17 vs 2.31% on 6/30/17), we did see volatility during the quarter. The 10-year yield hit a high of 2.41% on May 10 and a low of 2.13% on June 14. In spite of this volatility in benchmark rates, IG credit spreads continued to tighten throughout the quarter. The BofAML US Corporate Master OAS Index began the quarter at 1.24 and ended at 1.15, the tightest level we've seen all year.

Second quarter Investment Grade debt issuance, excluding SSA (Sovereigns, Supranationals and Agencies) came in at approximately $326.7 billion from 232 transactions and 417 tranches - $82.6bn (56 deals) for April, $158.1bn (92 deals) for May and $86bn (84 deals) in June. While it was the third largest 2Q ever, it was 17% behind the 1Q 2017 which came in at $393.6 billion and 7.4% behind 2Q 2016 which came in at $352.9 billion.

The top 5 largest Q2 totals come in at $358bn (2015), $353bn (2016), **$327bn (2017)**, $302bn (2014) and $286bn (2008). Overall, 2nd quarter issuance, inclusive of SSA and retails deals, came in at approximately $394 billion, significantly lower than the $450 billion done 2Q last year.

We saw several multi-tranche jumbo transactions priced. The 5 largest deals of the quarter made up about 13% of the total volume – 1. $11bn Qualcomm (A1/A) 9-part priced on 5/19/17; 2. $9.675bn Becton Dickinson (Ba1/ BBB+) 7-part priced on 5/22/17; 3. $7.75bn Reckitt Benckiser (A3/A-) 4-part 144A priced on 6/21/17; 4. $7bn Apple Inc. (Aa1/AA+) 6-part priced 5/4/17; 5. $6.75bn Bank of America (Baa1/BBB+) 4-part priced 4/19/17.

2Q 2017 NUMBERS (excluding SSA):

VOLUME: $326.7 billion
NUMBER OF DEALS: 232
NUMBER OF TRANCHES: 417

Capital Markets : Investment Grade Debt (cont.)

2Q 2017 NUMBERS (excluding SSA) cont.:

AVERAGE DEAL SIZE: $1.4bn
AVERAGE IPT/ PRICING DIFFERENTIAL: -18bps
AVERAGE TIMES COVERED: 3.12x
AVERAGE NEW ISSUE CONCESSION: -0.53bps
TOTAL DOMESTIC: $224.2bn (69%)/ 169 deals
TOTAL YANKEE: $102.5bn (31%)/ 63 deals
TOTAL INDUSTRIAL: $150.2bn (46%)/ 88 deals
TOTAL FIG: $145.1bn (44%)/ 111 deals
TOTAL UTILITY: $31.4bn (10%)/ 33 deals
SHORT (< 5yrs): $68.3bn (21%)
INTERMEDIATE (5-20yrs): $205.6bn (63%)
LONG (20+ yrs): $48.1bn (15%)
PERPETUAL: $4.7bn (1%)

For additional information please contact John Pascente at John.Pascente@penserra.com

Equity: The Value of a Vote

We are starting to see a trend back to multi-class structures as companies want to retain control but have the flexibility to issue stock and not dilute ownership. How do they do this? Issue non-voting shares of course. As more and more companies begin to offer non-voting shares it is time to understand the true value of the vote.

Most stocks typically offer 1 vote per share owned. That is not the case for 500+ global multiclass companies that have separate voting and nonvoting lines. Essentially the value of the vote should be the current spread between the vote and non-vote shares, but there are a handful of variables such as market liquidity, company buybacks and index changes that can distort this valuation at times. Historically this premium averages about 2% but this does not explain the whole story. We see votes trade as high as 100% over the non-vote (company looking for control as cheaply as possible) to inverted situations where the vote trades at a discount to non-voting shares. Regardless to the vote- both classes are fundamentally the same.

- Generally both classes have the same economic rights to all company profits
- Dividends are typically identical for both classes of stock
- In the event of a take over- most structures require the same take out price
- Only material difference is the vote

Index representation

- As of 2015, the S&P 500 recognized multi-class securities and added both lines to the index (liquidity permitting)
- Most indexes now recognize both classes of stock

Equity: The Value of a Vote (Cont.)

In some cases the vote is absolutely **worthless** but still demands a premium. GOOGLE is a classic example of this situation. They currently have 3 classes of stock.

- Class A (GOOGL) – controls 1 vote per share
- Class B (not traded) – controls 10 votes per share
- Class C (GOOG) – controls 0 votes per share

If you want to have any say you must own either class A or B. Given class B does not trade you are stuck with buying class A. So, for mere $18.20 (GOOGL $971.85 – GOOG $953.65) you can control a vote.

Market Capitalization

	Ticker		Security Description	Par Value	Shares Out	Price	Voting Rgt	Market Cap of Class
11)	GOOGL	US	Class A	0.0010	297,628,801	971.85	1.0000	289,251,532,427
12)	1315587D	US	Class B	0.0010	47,152,692	962.75	10.0000	45,396,332,025
13)	GOOG	US	Class C	0.0010	346,967,110	953.65	0.0000	330,885,184,452

*Source: Bloomberg

- Class A controls 297,628,801 votes (shares outstanding multiplied by voting rights per share)
- Class B controls 471,526,920 votes (shares outstanding multiplied by voting rights per share)

So no matter how many shares you purchase of Class A you will never gain meaningful control!
In other cases, the voting shares are trading at a 2% discount to the non-vote. 21st Century FOX is a good example of this phenomenon.

FOX US Equity — Enterprise Value

Twenty-First Century Fox Inc — Currency USD

Market Capitalization

	Ticker		Security Description	Par Value	Shares Out	Price	Voting Rgt	Market Cap of Class
11)	FOXA	US	Class A Common Stock	0.0100	1,052,334,514	27.18	0.0000	28,602,452,091
12)	FOX	US	Class B Common Stock	0.0100	798,520,953	26.74	1.0000	21,352,450,283

*Source: Bloomberg

Similar structures but drastically different valuations. These fluctuations are the result of typically short-term liquidity events occurring in the market. In the case of FOX, the event is a prolonged buyback program where they only can buy back the non-vote shares.

To quantify the true value of the vote in a logical manner is difficult given the market demands a premium for a worthless vote and pays you a 2% discount to take the vote. Overtime there is a mean reversion that occurs once the outside variables subside. The key is understanding the drivers and assessing if the market is pricing the impact correctly.

We continue to see multi-class structures arise as companies want to retain control but have the flexibility to issue stock and not dilute ownership. We have conducted an analysis of a subset of these securities which shows that over time you can add alpha to the position by owning a certain class of stock at a certain time.

For additional information please contact Kevin McLaverty at Kevin.McLaverty@penserra.com.

Penserra Research Universe

Ticker	Full Company Name
AAON	AAON INC
ABG	ASBURY AUTO GRP
AMWD	AMER WOODMARK CO
AOS	SMITH (A.O.)CORP
AWI	ARMSTRONG WORLD
AXL	AMER AXLE & MFG
BGS	B&G FOODS INC
BLDR	BUILDERS FIRSTSO
BLL	BALL CORP
BREW	CRAFT BREW ALLIA
BUFF	BLUE BUFFALO PET
CAG	CONAGRA FOODS
CAL	CALERES INC
CCK	CROWN HOLDINGS I
CFI	CULP INC
CHKE	CHEROKEE INC
CLC	CLARCOR INC
CLX	CLOROX CO
COLM	COLUMBIA SPORTSW
CPB	CAMPBELL SOUP CO
CTB	COOPER TIRE & RU
CVGW	CALAVO GROWERS I
DECK	DECKERS OUTDOOR
DF	DEAN FOODS CO
DOOR	MASONITE INTERNA
DW	DREW INDS INC
DXCM	DEXCOM
ENR	ENERGIZER HOLDIN
ETH	ETHAN ALLEN
FBHS	FORTUNE BRANDS H
FLO	FLOWERS FOODS
FRPT	FRESHPET INC
GES	GUESS? INC
GIII	G III APPAREL

Ticker	Full Company Name
GIS	GENERAL MILLS IN
GMED	GLOBUS MEDICAL I
GRC	GORMAN-RUPP CO
GT	GOODYEAR TIRE
HBI	HANESBRANDS INC
HELE	HELEN OF TROY
HOLX	HOLOGIC INC
HSY	HERSHEY CO/THE
HZN	HORIZON GLOBAL
ICON	ICONIX BRAND GRO
INGN	INOGEN INC
JAH	JARDEN CORP
JBSS	SANFILIPPO (JOHN
JJSF	J & J SNACK FOOD
K	KELLOGG CO
KATE	KATE SPADE & CO
KHC	KRAFT HEINZ CO/T
KORS	MICHAEL KORS HOL
LNCE	SNYDERS-LANCE
LULU	LULULEMON ATH
LZB	LA-Z-BOY INC
MAS	MASCO CORP
MJN	MEAD JOHNSON
MKC	MCCORMICK-N/V
MOD	MODINE MFG CO
MPAA	MOTORCAR PARTS
NTGR	NETGEAR INC
NWL	NEWELL RUBBERMAI
NX	QUANEX BUILDING
OI	OWENS-ILLINOIS
OME	OMEGA PROTEIN CP
PAG	PENSKE AUTOMOTIV
PERY	PERRY ELLIS INTL
PF	PINNACLE FOODS I

PENSERRA

Penserra Research Universe

Ticker	Full Company Name
PGEM	PLY GEM HOLDINGS
PGTI	PGT INC
PLCM	POLYCOM INC
PODD	INSULET CORP
POST	POST HOLDINGS IN
PVH	PVH CORP
RL	RALPH LAUREN COR
SAFM	SANDERSON FARMS
SAM	BOSTON BEER-A
SHOO	STEVEN MADDEN
SJM	JM SMUCKER CO
SKX	SKECHERS USA-A
SMP	STANDARD MOTOR
SNHY	SUN HYDRAULICS
SSD	SIMPSON MFG
STRT	STRATTEC SEC
THS	TREEHOUSE FOODS
TIVO	TIVO INC
TPX	TEMPUR SEALY INT
TR	TOOTSIE ROLL IND
TREX	TREX CO INC
TSN	TYSON FOODS-A
UA	UNDER ARMOUR-A
UFI	UNIFI INC
UFPI	UNIVERSAL FOREST
USG	USG CORP
VRA	VERA BRADLEY INC
WEYS	WEYCO GROUP
WGO	WINNEBAGO INDS
WWAV	WHITEWAVE FOOD
WWW	WOLVERINE WORLD
ZAGG	ZAGG INC

For additional information please contact George Schmilinsky at research@penserra.com.

CONTACTS

Fixed Income Sales and Trading Hotline
Phone: 646.459.0596
Email: bondtrading@penserra.com

Index Management
Phone: 800.456.8850
Email: indexfunds@penserra.com

Equity Sales and Trading Hotline
Phone: 800.456.8850
Email: trading@penserra.com

Transition Management Hotline
Phone: 855.736.7377
Email: transitions@penserra.com

Tailor Research Hotline
Phone: 800.456.8850
Email: research@penserra.com

New York
75 Broad Street, 10th Floor
New York, NY 10004
Phone: 844.736.7377

Orinda, CA
(San Francisco Bay Area)
4 Orinda Way, Suite 100-A
Orinda, CA 94563
Phone: 888.925.8008

Chicago (Cheevers division)
440 LaSalle, Suite 710
Chicago, IL 60605
Phone: 800.611.2794

ABOUT PENSERRA

Founded in 2007, Penserra is an institutional financial services firm with offices located in the New York, Chicago, and San Francisco Bay Area. Our services include global equity trading, fixed income trading, equity research, transition management, and index asset management. As a full service broker-dealer, our trading desk is staffed with experienced trading veterans that cover global equity markets around the clock 24 hours a day/6 days a week. Our transition management services are supported by an exceptional team coming from firms like BlackRock, BNY Mellon, and Russell Investments. The index asset management service has created an entire investment process built with risk controls at its foundation while producing consistent and replicable benchmark tracking. Penserra leverages the experience of our people with state of the art technology to deliver solutions that address the global market challenges facing our customers. Penserra is a certified Minority-Owned Business Enterprise (MBE).

DISCLAIMER