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Asset Managers & Brokers | North America

4Q18 Preview: Buy AMTD,
Negative on VIRT into the Print

Lowering 4Q EPS estimates by -11% for the group on sharply weaker financial markets; we're -6% below cons. Into 4Q EPS, we're buyers of AMTD on higher trading activity & deriv mix and negative on VIRT with weakening trading volumes that's not reflected in expectations with share outperformance.

Into 4Q18 amid the return of volatility, we're buyers of AMTD (Overweight) and sellers of VIRT (Equal-weight). We view **AMTD** as compelling given their greater skew to trading revenues among the eBrokers (~27%), greater derivative mix and green shoots with rising client cash levels that could all deliver upside surprise to our \$1.00 EPS est that's 1% above the street. Further, we view concerns around commission price cuts as overdone as we don't expect SCHW to cut. Conversely, we think expectations for **VIRT** are too high which has significantly outperformed our coverage group (+26% vs group avg -16%) yet we see challenges from realizing such optimism near-term with weakening trading volumes that are underappreciated and could lead to disappointment; see 26% downside to consensus estimates.

4Q18 upended what had been a positive year for equity markets up until that point, with the S&P 500 falling nearly -14% in the quarter and ending the year down -6%. Volatility returned fiercely in October and December, with the VIX averaging near 20 the entire quarter and +60% above levels seen in 3Q18. This type of environment with lower beta and higher volatility affects our sub sectors differently. Lower portfolio NAVs reduce near-term earnings for both traditional and alternative mgrs., and roll through to lower forward NAVs for traditionals while a choppy backdrop results in less portfolio monetization activity for the Alts, pressuring cash earnings. Conversely, the eBrokers should benefit from greater volatility that leads to higher trading activity and rising cash balances but that's partially offset by the forward curve's removal of rate hike expectations. For our coverage group broadly, we are lowering 4Q18 EPS estimates by -11% on a median basis (-0.6% for brokers, -10.9% for trads, -62% for alts). We are below consensus on a median basis for the group by -6%, which we note has not fully adjusted yet.

2019 Outlook: In a Choppy Market, Beware the Value Traps, we favor the discount brokers (**AMTD**, **ETFC** and **SCHW**) given their more defensive earnings profile (trading activity, rising cash balances) as well as traditional asset manager **VCTR** for an idiosyncratic play on M&A. Should such an environment as 4Q18 persist into the new year, we'd expect weaker monetization activity from the alts and lower average AuM for the traditionals, leading to lower EPS.

MORGAN STANLEY & CO. LLC

Michael J. Cyprys, CFA, CPA
EQUITY ANALYST

Michael.Cyprys@morganstanley.com +1 212 761-7619

Zachary N Feierstein, CPA
RESEARCH ASSOCIATE

Zack.Feierstein@morganstanley.com +1 212 296-8248

Peter Kaloostian, CFA
RESEARCH ASSOCIATE

Peter.Kaloostian@morganstanley.com +1 212 761-3664

Stephanie Ma

RESEARCH ASSOCIATE

Stephanie.Ma@morganstanley.com +1 212 296-3552

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In-Line

Exhibit 1: Morgan Stanley New vs. Old Price Targets

Exhibit 1: Morgan Stanley New Deal					
Ticker	Rating	Price Target			
		New (\$)	Old (\$)	Chg %	Upside %
Traditionals					
BEN	UW	\$27	\$29	-7%	-8%
BLK	OW	489	514	-5%	29%
HLNE	EW	42	43	-2%	17%
IVZ	EW	18	22	-18%	10%
LM	UW	22	25	-12%	-15%
BSIG	EW	11	14	-21%	-1%
TROW	EW	98	105	-7%	10%
VCTR	OW	14	15	-7%	33%
VRTS	EW	85	111	-23%	6%
WDR	UW	15	17	-12%	-16%
WETF	EW	7.5	9.0	-17%	18%
Avg (excl. HLNE)				-13%	7%
Median (excl. HLNE)				-12%	8%
Alts					
APO	EW	28	34	-18%	17%
ARES	EW	20	22	-9%	17%
BX	OW	36	42	-14%	23%
CG	EW	19	23	-17%	22%
KKR	EW	22	25	-12%	18%
OAK	OW	48	48	0%	17%
Avg				-12%	19%
Median				-13%	17%
Brokers					
SCHW	OW	55	60	-8%	35%
ETFC	OW	61	66	-8%	41%
LPLA	EW	66	66	0%	10%
AMTD	OW	59	65	-9%	22%
Avg				-8%	27%
Median				-8%	29%
Market Structure					
VIRT	EW	27	28	-4%	1%
Coverage Overall					
Avg				-10%	14%
Median				-9%	17%

Source: Company Data, Morgan Stanley Research estimates; Closing prices as of 1/03/2019

Note 1: BrightSphere (BSIG) was formerly known as OM Asset Management (OMAM) which changed names in March 2018; Note 2: APO, BX, CG and OAK are publicly traded partnerships, so investors will receive a K-1 instead of a Form 1099 for tax reporting purposes. Note 3: KKR and ARES changed to C-corporations (from a partnership) during 2018 and so investors will receive a Form 1099 going forward.

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For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

Executive Summary

2019 Outlook: Our Views

E-brokers into 2019, we expect 5% net new asset growth (similar to 4Q levels), rising cash balances, 15 bps NIM expansion, -4% trading activity decline (could see upside), and expense belt tightening that boosts operating margins by +220 bps to 38.5% on average, plus accelerating capital return leading to +8% EPS growth y/y in 2019. The 15 bps of NIM expansion to 242 bps on average is despite our use of the most recent forward curve reflecting zero rate hikes in 2019 (and a rate cut in 2020) due to benefits from the most recent rate hike and the reinvestment of maturing lower yielding fixed rate investments. **Overweight AMTD, ETFC, SCHW.**

Traditionals into 2019, we expect M&A to accelerate given weakening fundamentals but don't expect large premiums; and expect EV/EBITDA to become the primary valuation approach in the context of weak growth and greater balance sheet divergence. We look for persistent outflows of -1.3% in 2019 (vs -3.6% in 2018) with five out of nine covered traditionals expected to report outflows (vs. seven out of nine during 2018). Further, a weak financial market backdrop will pressure average AUM levels that combined with fee pressure and cost challenges likely see operating margins declining by nearly 300 bps y/y to 35% on average and EPS decline of -9% y/y. **Overweight VCTR, BLK.**

Alts 2019, we look for more C-Corp conversions (**BX** next?), and change in EPS reporting methodology toward less volatile cash earnings and away from mark to market EPS (**APO** next?). We expect high single-digit portfolio returns in 2019 given the subdued market environment. Though still healthy relative to other asset classes, this would be noticeably below our longer term return expectations of mid to high teens given the choppy backdrop. In such a choppy backdrop, we also expect weaker cash performance fees as the monetization environment softens in the short term leading to minimal growth in cash earnings in 2019. Should the financial markets weaken further, we could see the Alts approach our floor valuations (bear case) and view Overweight **OAK** as most defensive with ~50c of pent-up earnings power once they active fees on their back-up distressed fund and could raise another large flagship distressed fund in 2020 that's not on the radar yet of investors. **Overweight OAK, BX.**

For more details see: [Asset Managers & Brokers: 2019 Outlook: In a Choppy Market, Beware the Value Traps \(4 Dec 2018\)](#)

4Q18 Preview

We're below consensus (-6.4%) on a median basis in 4Q and -40% below consensus EPS on average for the group, the bulk of which stem from the Alts where we see downside to consensus numbers though we note most have not adjusted yet. **We are most above consensus** for **KKR** and **ETFC**. Recall KKR changed their reporting method for EPS and now reports realized cash EPS (as opposed to mark to market EPS). A large KKR portfolio sale closed 12/31, sooner than expected worth \$310m in realized gross carry and is not yet reflected in consensus. **ETFC** will be the least impacted by equity

movements in the quarter, while still getting the full effect of the September rate hike (and partial December). We assume elevated buybacks given intra-quarter share price performance, driving upside to numbers. **We're most below consensus on APO and CG** on weak investment marks from public portfolio holdings.

Market backdrop in 4Q18: S&P 500 down -13.5% sequentially on a point to point basis and down -4.8% on avg daily basis from 3Q18; Russell 2000 down -20.5%, MSCI AC World down -12.7%, STOXX Europe 600 down -12.9%, MSCI EM down -7.4% and 2019-20 Crude Oil forward curve down -19.8% on avg. Credit: US Agg up +0.9%, BOFA ML US High Yield Master II Constrained down -4.6%, S&P Leveraged Loan down -3.4%, HFRX Global HF index down -5.8% and HFRX Special Situations index down -8.9%.

For the traditionals, we estimate *average* AUM decreases by -4.5% q/q in 4Q18, excluding WETF and HLNE (while daily avg. S&P was down -4.8% from 3Q18). We forecast market depreciation of -9.2% and LT net outflows of -1.9% (or -7.6% annualized). The average adjusted operating margin for the group is down -100 bps q/q to 33.4%.

For the brokers, we forecast average **annualized organic growth of +5.2%**, a slight acceleration from 3Q18 which saw an average of +5.0%. Due to higher volatility in October and December, we look for an uptick in trading activity levels leading to **DARTs increasing by +17% q/q on average**. The full effect of the September rate hike and partial effect of the December rate hike, offset by **higher deposit betas** over the quarter lead to **NIMs rising +8 bps q/q** on average to 239 bps.

For the Alts, we estimate **PE marks of -4.5%, RE appreciation of -0.5%, and Credit marks of -3.2%** on average across for the group. Public portfolio companies showed weakness with **APO's** publics down -28% on the low end and **OAK** at -13% on the high end driven systematic declines. Our average appreciation of public companies across PE and RE portfolios was -20.8%. Credit markets were broadly negative for the quarter with poor performance in high yield and levered loan indexes slightly offset by flat to slightly positive Investment Grade. Monetization activity across the group was lighter than forecasted and we decreased cash earnings estimates by -7.7%. **KKR** and **BX** were the most active with realizations in 4Q; however, we expect the pace of exits to slow given the known pipeline and challenging market backdrop. C-Corp conversion will continue to be in focus for investors following **KKR** and **ARES** announcements over the last three quarters and we expect to hear updated thoughts from management teams on index inclusion and corporate governance, as well as potential change in EPS reporting methodology toward cash earnings (and away from mark to market).

Buyers of AMTD into the quarter: We like AMTD into the print as sustained levels of elevated volatility should play favorably through their outsized trading revenue business relative to peers (~27% of total revs). We think fears of commission cuts are overblown near-term (a bull market phenomenon), and higher volatility could help drive more derivative usage (which supports the commission rate given better economics). We note the recent adjustment in the forward curve (now pricing in 0 rate hikes in 2019 and a rate cut in 2020) could at first glance dampen outer year revenue growth, however AMTD has a unique fixed rate ladder making up 75% of their total book, 25% of which is maturing at an low average yield of 110 bps, creating upside as they reinvest 7 years out (200 - 230bps currently). These factors, plus an inflection higher in average cash balances that are used to buy interest-yielding securities lead us to like the risk/reward

into the quarter.

AMTD monthly metrics through November give us an indication of the defensive earnings profile of the firm. Through November, average cash balances (BDA) have inflected higher for the second consecutive month to \$113.5b (+1% growth from \$112.3b average in Sept '18); we're looking for growth of +0.8% growth \$114.0b on average in 4Q18. Volatility has led to increased trading activity, as DARTs have grown +22% through Nov vs the prior quarter; we look for 17% growth in DARTS in 4Q. Margin balances have also held in despite the market environment, tracking +3% above the prior quarter average and we're expecting +2.5% growth q/q.

Sellers of VIRT into the quarter: Virtu has been the best performing stock among our coverage group in the quarter (+26%), with an accretive M&A announcement of ITG and no reliance on beta levels. Such an environment is ideal for a market maker, however we think the elevated volatility levels are fully priced into the stock at this time. We're sellers into the print because there are other inputs that drive market making revenue for Virtu aside from volatility, the main being number of retail shares traded. While volatility is up significantly, the number of retail shares traded (via IBKR disclosure) is down -2% q/q and down -26% y/y. Compared against the more recent volatility of 1Q18, retail shares traded are down -36%. We optimistically expect VIRT's average daily net trading income (ADNTI) to grow +13% q/q to \$3.18m (from \$2.82m in 3Q18) and on a year on year basis, we expect average daily net trading income declines -16% y/y (from \$3.77 in 4Q18). We think the street is over optimistic given the heightened volatility, and see downside to consensus numbers into the quarter. Current street estimates are for \$3.81m ADNTI, reflecting +35% q/q growth and +1% y/y growth. Our \$3.18m ADNTI estimate is -16% below consensus, and we are -26% below the street for 4Q18 EPS at \$0.31.

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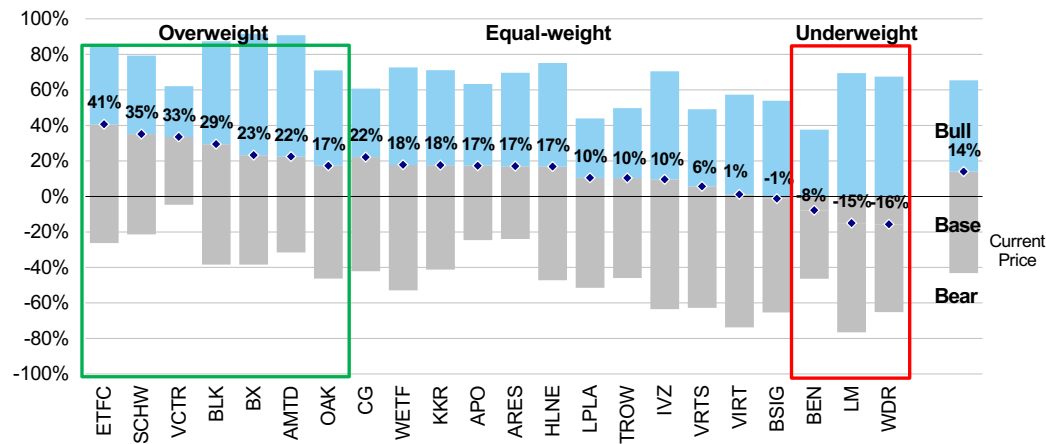
Exhibit 2: Morgan Stanley New vs. Old Price Target

Ticker	Rating	Price Target			
		New (\$)	Old (\$)	Chg %	Upside %
Traditionals					
BEN	UW	\$27	\$29	-7%	-8%
BLK	OW	489	514	-5%	29%
HLNE	EW	42	43	-2%	17%
IVZ	EW	18	22	-18%	10%
LM	UW	22	25	-12%	-15%
BSIG	EW	11	14	-21%	-1%
TROW	EW	98	105	-7%	10%
VCTR	OW	14	15	-7%	33%
VRTS	EW	85	111	-23%	6%
WDR	UW	15	17	-12%	-16%
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BX	OW	36	42	-14%	23%
CG	EW	19	23	-17%	22%
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Avg				-12%	19%
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Exhibit 3: Risk-Reward Profile



Source: Company Data, Morgan Stanley Research estimates; Price as of 01/03/2019

Morgan Stanley New vs. Old Estimates

Exhibit 4: Morgan Stanley New vs. Old Estimates: Lowering 4Q18 EPS estimates for traditionals by -10.7% on median basis, lowering by -62% for alts, and lowering by -0.6% for brokers

Ticker	4Q18e EPS				2018E EPS				2019E EPS				2020E EPS			
	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg
Traditionals																
BEN	0.61	0.72	(0.11)	-15.8%	2.94	3.04	(0.10)	-3.3%	2.51	2.85	(0.34)	-11.9%	2.56	2.75	(0.19)	-6.8%
BLK	6.60	6.92	(0.33)	-4.7%	27.49	27.81	(0.32)	-1.2%	25.87	27.72	(1.85)	-6.7%	27.92	30.23	(2.31)	-7.6%
HLNE	0.37	0.42	(0.05)	-10.7%	1.88	1.93	(0.04)	-2.3%	1.58	1.72	(0.14)	-8.4%	2.00	1.93	0.07	3.6%
IVZ	0.53	0.73	(0.20)	-27.8%	2.55	2.75	(0.20)	-7.3%	2.32	2.86	(0.53)	-18.7%	2.41	3.11	(0.70)	-22.4%
LM	0.63	0.84	(0.21)	-25.7%	3.05	3.27	(0.22)	-6.6%	2.82	3.28	(0.46)	-14.1%	2.67	3.22	(0.55)	-17.1%
BSIG	0.43	0.43	-	0.0%	1.86	1.86	-	0.0%	1.58	1.84	(0.25)	-13.8%	1.68	2.03	(0.35)	-17.1%
TROW	1.74	1.98	(0.24)	-12.2%	7.43	7.67	(0.24)	-3.1%	6.30	7.67	(1.37)	-17.9%	6.53	7.49	(0.96)	-12.8%
VCTR	0.41	0.44	(0.03)	-7.8%	1.67	1.71	(0.04)	-2.1%	2.23	2.58	(0.35)	-13.6%	3.37	3.75	(0.38)	-10.2%
VRTS	3.08	3.47	(0.39)	-11.3%	12.28	12.67	(0.39)	-3.1%	9.49	13.29	(3.80)	-28.6%	8.80	13.03	(4.23)	-32.5%
WDR	0.52	0.58	(0.06)	-10.5%	2.14	2.20	(0.06)	-2.7%	1.69	2.04	(0.34)	-16.9%	1.87	2.09	(0.22)	-10.5%
WETF	0.08	0.09	(0.01)	-9.8%	0.34	0.35	(0.01)	-2.6%	0.32	0.38	(0.06)	-14.7%	0.38	0.46	(0.08)	-18.2%
Avg				-12.4%				-3.1%				-15.0%				-13.8%
Median				-10.7%				-2.7%				-14.1%				-12.8%
Alts (ENI)																
APO	(1.17)	0.02	(1.18)	-7243.8%	(0.37)	0.81	(1.18)	-145.6%	2.14	2.55	(0.41)	-16.0%	3.20	3.36	(0.16)	-4.9%
ARES	0.26	0.44	(0.17)	-39.6%	1.28	1.46	(0.18)	-12.3%	1.30	1.46	(0.16)	-11.2%	1.55	1.60	(0.05)	-3.3%
BX	0.21	0.63	(0.42)	-66.8%	2.52	2.94	(0.42)	-14.4%	2.35	3.42	(1.08)	-31.4%	3.41	3.35	0.06	1.7%
CG	(0.38)	0.57	(0.95)	-165.8%	1.03	1.98	(0.95)	-48.0%	1.67	2.71	(1.04)	-38.4%	2.87	3.60	(0.73)	-20.2%
KKR	0.67	0.52	0.15	29.3%	2.03	1.88	0.15	8.0%	1.68	2.00	(0.32)	-15.8%	1.90	2.16	(0.26)	-11.9%
OAK*	0.35	0.82	(0.47)	-57.2%	2.61	3.10	(0.48)	-15.6%	2.92	3.58	(0.66)	-18.4%	3.25	3.59	(0.34)	-9.6%
Avg.				-1257.3%				-38.0%				-21.9%				-8.0%
Median				-62.0%				-15.0%				-17.2%				-7.2%
Brokers																
SCHW	0.65	0.66	(0.02)	-2.5%	2.44	2.46	(0.02)	-0.7%	2.79	3.00	(0.21)	-7.0%	2.88	3.16	(0.28)	-8.8%
ETFC	1.07	1.06	0.01	1.2%	3.89	3.86	0.04	0.9%	4.23	4.19	0.04	0.9%	4.43	4.89	(0.46)	-9.4%
LPLA	1.33	1.31	0.02	1.2%	5.17	5.15	0.02	0.3%	5.47	5.96	(0.50)	-8.3%	6.06	6.58	(0.52)	-7.9%
AMTD	1.00	1.03	(0.03)	-3.1%	3.55	3.58	(0.03)	-0.8%	3.80	4.15	(0.35)	-8.5%	4.14	4.62	(0.47)	-10.3%
Avg.				-0.8%				-0.1%				-5.7%				-9.1%
Median				-0.6%				-0.2%				-7.7%				-9.1%
Market Structure																
VIRT	0.31	0.35	(0.04)	-11.3%	1.60	1.63	(0.04)	-2.4%	1.63	1.69	(0.06)	-3.6%	2.17	2.21	(0.04)	-1.9%
Coverage Overall																
Avg.				-349.8%				-12.0%				-14.7%				-10.8%
Median				-11.0%				-2.6%				-14.0%				-9.9%

Note: OAK EPS represents Adjusted Net income or ANI, KKR and ARES represent Realized Net Income. Source: Company Data, Morgan Stanley Research estimates;

Note: Our 4Q18E TROW EPS represents GAAP EPS (not operating EPS).

Note: EPS above for LPLA is adjusted. 4Q18e GAAP EPS is \$1.20, 2018/2019/2020 GAAP EPS is \$4.68/\$4.94/\$5.52

Note: EPS above for LM is GAAP. 4Q18e Adj EPS is \$0.64, 2018/2019/2020 CY Adj EPS is \$3.01/\$2.82/\$2.67

Note: BrightSphere (BSIG) is formerly known as OM Asset Management (OMAM) which changed names in March 2018.

Exhibit 5: Morgan Stanley New vs. Old Estimates for Fiscal Year EPS Estimate Changes

Ticker	FY2018E EPS				FY2019E EPS				FY2020E EPS			
	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg
BEN	3.21	3.20	0.01	0.3%	2.51	2.90	(0.39)	-13.5%	2.53	2.72	(0.19)	-6.7%
HLNE	1.63	1.63	-	0.0%	1.58	1.71	(0.14)	-7.9%	1.81	1.80	0.01	0.7%
LM	3.21	3.21	-	0.0%	2.98	3.31	(0.33)	-9.8%	2.80	3.29	(0.49)	-14.9%
AMTD	3.34	3.34	-	0.0%	3.79	4.06	(0.27)	-6.7%	4.08	4.54	(0.46)	-10.2%
Avg.				0.1%				-9.5%				-7.8%
Median				0.0%				-8.8%				-8.4%

Source: Company Data, Morgan Stanley Research estimates; Note: BEN, LM, and AMTD have different fiscal years than the rest of our coverage universe; BEN fiscal year ends 9/30, LM fiscal year ends 3/31, AMTD fiscal year ends 9/30, HLNE fiscal year ends 3/31

Exhibit 6: Morgan Stanley New v. Old Estimates Dividends: Reducing Alts' dividends by -7.0% in 4Q18

Ticker	4Q18e Dividend				2018e Dividend				2019e Dividend				2020e Dividend			
	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg
Traditionals																
BEN	0.25	0.25	-	0.0%	3.94	3.94	-	0.0%	1.04	1.04	-	0.0%	1.14	1.14	-	0.0%
BLK	3.13	3.13	-	0.0%	12.02	12.02	-	0.0%	14.02	14.02	-	0.0%	15.42	15.42	-	0.0%
HLNE	0.21	0.21	-	0.0%	0.85	0.85	-	0.0%	0.96	0.96	-	0.0%	1.09	1.09	-	0.0%
IVZ	0.30	0.30	-	0.0%	1.20	1.20	-	0.0%	1.25	1.25	-	0.0%	1.37	1.37	-	0.0%
LM	0.34	0.34	-	0.0%	1.30	1.30	-	0.0%	1.36	1.42	(0.06)	-4.2%	1.38	1.46	(0.08)	-5.5%
BSIG	0.10	0.10	-	0.0%	0.40	0.40	-	0.0%	0.44	0.44	-	0.0%	0.49	0.49	-	0.0%
TROW	0.70	0.70	-	0.0%	2.80	2.80	-	0.0%	2.80	2.94	(0.14)	-4.8%	2.85	2.99	(0.14)	-4.8%
VCTR	-	-	-	0.0%	-	-	-	0.0%	0.07	0.09	(0.02)	-18.1%	0.12	0.14	(0.02)	-12.1%
VRTS	0.55	0.55	-	0.0%	2.00	2.00	-	0.0%	2.27	2.33	(0.07)	-2.8%	2.45	2.61	(0.16)	-6.3%
WDR	0.25	0.25	-	0.0%	1.00	1.00	-	0.0%	1.00	1.00	-	0.0%	1.00	1.00	-	0.0%
WETF	0.03	0.03	-	0.0%	0.12	0.12	-	0.0%	0.12	0.12	-	0.0%	0.12	0.12	-	0.0%
Avg				0.0%				0.0%				-2.7%				-2.6%
Median				0.0%				0.0%				0.0%				0.0%
Avg				0.0%				0.0%				-3.7%				-3.6%
Median				0.0%				0.0%				-1.4%				-2.4%
Alts																
APO	0.39	0.54	(0.15)	-27.8%	1.67	1.82	(0.15)	-8.3%	2.00	2.16	(0.16)	-7.4%	2.56	2.28	0.28	12.3%
ARES	0.28	0.28	-	0.0%	1.12	1.12	-	0.0%	1.25	1.25	-	0.0%	1.31	1.31	-	0.0%
BX	0.56	1.05	(0.49)	-46.8%	2.13	2.62	(0.49)	-18.8%	1.89	2.78	(0.90)	-32.2%	2.95	2.94	0.01	0.3%
CG	0.39	0.24	0.15	61.8%	1.36	1.21	0.15	12.2%	1.80	1.89	(0.09)	-4.7%	2.26	2.43	(0.17)	-7.0%
KKR	0.13	0.13	-	0.0%	0.59	0.59	-	0.0%	0.50	0.50	-	0.0%	0.54	0.54	-	0.0%
OAK*	0.74	0.86	(0.12)	-14.0%	2.95	3.07	(0.12)	-3.9%	2.77	3.17	(0.40)	-12.7%	2.97	3.24	(0.27)	-8.4%
Avg				-4.5%				-3.1%				-9.5%				-0.4%
Median				-7.0%				-2.0%				-6.0%				0.0%
Brokers																
SCHW	0.13	0.13	-	0.0%	0.46	0.46	-	0.0%	0.73	0.73	-	0.0%	0.91	0.91	-	0.0%
ETFC	0.14	0.14	-	0.0%	0.14	0.14	-	0.0%	0.57	0.57	-	0.0%	0.63	0.63	-	0.0%
LPLA	0.25	0.25	-	0.0%	0.99	0.99	-	0.0%	1.04	1.04	-	0.0%	1.14	1.14	-	0.0%
AMTD	0.30	0.30	-	0.0%	0.93	0.93	-	0.0%	1.23	1.23	-	0.0%	1.35	1.35	-	0.0%
Avg				0.0%				0.0%				0.0%				0.0%
Median				0.0%				0.0%				0.0%				0.0%
Market Structure																
VIRT	0.24	0.24	-	0.0%	0.96	0.96	-	0.0%	0.96	0.96	-	0.0%	0.96	0.96	-	0.0%
Coverage Overall																
Avg.				-1.2%				-0.9%				-3.9%				-1.4%
Median				0.0%				0.0%				0.0%				0.0%

Source: Company Data, Morgan Stanley Research estimates; Note: For OAK, our numbers represent Adjusted Net Income (ANI)

Our Estimates vs. Consensus

Exhibit 7: Morgan Stanley vs. Consensus: We're -6% below consensus on 4Q18 EPS for the group, -5.1% for Traditionals, -57% below consensus for Alts, +1.1% above consensus for brokers, and in-line with consensus on 4Q18 dividends for the Alts.

Ticker	4Q18e EPS				2018E EPS				2019E EPS				2020E EPS			
	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff
Traditionals																
BEN	0.61	0.72	(0.11)	(15.3%)	2.94	3.36	(0.42)	(12.5%)	2.51	2.82	(0.31)	(11%)	2.56	2.89	(0.33)	(11%)
BLK	6.60	6.82	(0.22)	(3.3%)	27.49	27.67	(0.18)	(0.7%)	25.87	27.79	(1.92)	(7%)	27.92	30.54	(2.62)	(9%)
HLNE	0.37	0.42	(0.05)	(11.4%)	1.88	1.73	0.15	8.8%	1.58	1.95	(0.37)	(19%)	2.00	2.01	(0.01)	(1%)
IVZ	0.53	0.64	(0.11)	(17.3%)	2.55	2.62	(0.07)	(2.6%)	2.32	2.62	(0.30)	(11%)	2.41	2.76	(0.35)	(13%)
LM	0.63	0.80	(0.17)	(21.7%)	3.05	3.26	(0.21)	(6.3%)	2.82	3.27	(0.45)	(14%)	2.67	3.69	(1.02)	(28%)
BSIG	0.43	0.45	(0.02)	(3.8%)	1.86	1.87	(0.01)	(0.6%)	1.58	1.88	(0.30)	(16%)	1.68	2.09	(0.41)	(20%)
TROW	1.74	1.79	(0.05)	(2.8%)	7.43	7.64	(0.21)	(2.7%)	6.30	7.37	(1.07)	(15%)	6.53	7.87	(1.34)	(17%)
VCTR	0.41	0.43	(0.02)	(5.1%)	1.67	1.69	(0.02)	(1.1%)	2.23	2.58	(0.35)	(14%)	3.37	3.88	(0.51)	(13%)
VRTS	3.08	3.33	(0.25)	(7.6%)	12.28	12.53	(0.25)	(2.0%)	9.49	12.92	(3.43)	(27%)	8.80	13.96	(5.16)	(37%)
WDR	0.52	0.54	(0.02)	(3.7%)	2.14	2.21	(0.07)	(3.3%)	1.69	1.95	(0.26)	(13%)	1.87	2.05	(0.18)	(9%)
WETF	0.08	0.08	-	0.0%	0.34	0.34	-	0.0%	0.32	0.34	(0.02)	(5%)	0.38	0.42	(0.04)	(10%)
Avg				(8.4%)				(2.1%)				(13.7%)				(15.1%)
Median				(5.1%)				(2.0%)				(13.6%)				(12.6%)
Alts (ENI)																
APO	(1.17)	0.33	(1.50)	(453.4%)	(0.37)	1.16	(1.53)	(132%)	2.14	3.17	(1.03)	(32%)	3.20	3.48	(0.28)	(8%)
ARES	0.26	0.39	(0.13)	(32.1%)	1.28	1.40	(0.12)	(8%)	1.30	1.70	(0.40)	(24%)	1.55	2.09	(0.54)	(26%)
BX	0.21	0.62	(0.41)	(66.1%)	2.52	2.94	(0.42)	(14%)	2.35	3.22	(0.87)	(27%)	3.41	3.50	(0.09)	(3%)
CG	(0.38)	0.53	(0.91)	(170.9%)	1.03	1.96	(0.93)	(47%)	1.67	2.94	(1.27)	(43%)	2.87	3.23	(0.36)	(11%)
KKR	0.67	0.56	0.11	19.1%	2.03	1.93	0.10	5%	1.68	1.88	(0.20)	(11%)	1.90	2.01	(0.11)	(5%)
OAK*	0.35	0.67	(0.32)	(47.6%)	2.61	2.89	(0.28)	(10%)	2.92	3.24	(0.32)	(10%)	3.25	3.82	(0.57)	(15%)
Avg.				(125.2%)				(34%)				(24%)				(11%)
Median				(56.9%)				(12%)				(25%)				(10%)
Brokers																
SCHW	0.65	0.64	0.01	1.1%	2.44	2.44	-	0%	2.79	2.87	(0.08)	(3%)	2.88	3.16	(0.28)	(9%)
ETFC	1.07	1.02	0.05	5.4%	3.89	3.83	0.06	2%	4.23	4.18	0.05	1%	4.43	4.65	(0.22)	(5%)
LPLA	1.33	1.36	(0.03)	(2.6%)	5.17	5.20	(0.03)	(1%)	5.47	6.24	(0.77)	(12%)	6.06	7.18	(1.12)	(16%)
AMTD	1.00	0.99	0.01	1.1%	3.55	3.49	0.06	2%	3.80	4.06	(0.26)	(6%)	4.14	4.50	(0.36)	(8%)
Avg				1.2%				1%				(5%)				(9%)
Median				1.1%				1%				(5%)				(8%)
Market Structure																
VIRT	0.31	0.42	(0.11)	(27.0%)	1.60	1.71	(0.11)	(7%)	1.63	1.65	(0.02)	(1%)	2.17	1.90	0.27	14%
Coverage Overall																
Avg.				(39.3%)				(11%)				(14%)				(12%)
Median				(6.4%)				(2%)				(13%)				(11%)

Ticker	4Q18e Dividend				2018E Dividend				2019E Dividend				2020E Dividend			
	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff	MS	Cons.	Diff	% Diff
Traditionals																
BEN	0.25	0.25	-	0.0%	3.94	3.19	0.75	24%	1.04	1.00	0.0	4%	1.14	1.04	0.1	9%
BLK	3.13	3.13	-	0.0%	12.02	12.00	0.02	0%	14.02	13.12	0.90	7%	15.42	13.74	1.68	12%
HLNE	0.21	0.21	-	0.0%	0.85	0.78	0.07	9%	0.96	0.94	0.0	2%	1.09	1.09	-	0%
IVZ	0.30	0.30	-	0.0%	1.20	1.20	-	0%	1.25	1.26	(0.01)	(1%)	1.37	1.31	0.06	5%
LM	0.34	0.34	-	0.0%	1.30	1.29	0.0	1%	1.36	1.43	(0.1)	(5%)	1.38	1.53	(0.1)	(10%)
BSIG	0.10	0.10	-	0.0%	0.40	0.39	0.01	3%	0.44	0.43	0.01	3%	0.49	0.47	0.02	4%
TROW	0.70	0.70	-	0.0%	2.80	2.79	0.01	0%	2.80	3.09	(0.29)	(9%)	2.85	3.31	(0.46)	(14%)
VCTR	-	-	-	0.0%	-	-	-	0.0%	0.07	-	-	0%	0.12	-	-	0.0%
VRTS	0.55	0.55	-	0.0%	2.00	1.98	0.02	1%	2.27	2.29	(0.02)	(1%)	2.45	2.50	(0.05)	(2%)
WDR	0.25	0.25	-	0.0%	1.00	1.00	-	0%	1.00	1.00	-	0%	1.00	1.00	-	0%
WETF	0.03	0.03	-	0.0%	0.12	0.12	-	0%	0.12	0.13	(0.01)	(8%)	0.12	0.15	(0.03)	(20%)
Avg				0.0%				3.4%				(0.7%)				(1.4%)
Median				0.0%				0.4%				0.0%				0.0%
Alts																
APO	0.39	0.54	(0.15)	(27.3%)	1.67	1.80	(0.13)	(7%)	2.00	2.66	(0.66)	(25%)	2.56	2.94	(0.38)	(13%)
ARES	0.28	0.28	-	0.0%	1.12	1.12	-	0%	1.25	1.20	0.05	5%	1.31	1.33	(0.02)	(2%)
BX	0.56	0.70	(0.14)	(20.3%)	2.13	2.25	(0.12)	(5%)	1.89	2.55	(0.66)	(26%)	2.95	2.82	0.13	5%
CG	0.39	0.35	0.04	10.7%	1.36	1.25	0.11	9%	1.80	2.01	(0.21)	(10%)	2.26	2.25	0.01	0%
KKR	0.13	0.13	-	0.0%	0.59	0.60	(0.01)	(2%)	0.50	0.52	(0.02)	(4%)	0.54	0.57	(0.03)	(6%)
OAK*	0.74	0.64	0.10	15.6%	2.95	2.83	0.12	4%	2.77	2.93	(0.16)	(6%)	2.97	3.41	(0.44)	(13%)
Avg				(3.5%)				(0%)				(11%)				(5%)
Median				0.0%				(1%)				(8%)				(4%)
Brokers																
SCHW	0.13	0.13	-	0.0%	0.46	0.46	-	0%	0.73	0.60	0.13	21%	0.91	0.71	0.20	28%
ETFC	0.14	0.14	-	0.0%	0.14	0.14	-	0%	0.57	0.57	-	0%	0.63	0.60	0.03	5%
LPLA	0.25	0.25	-	0.0%	0.99	1.01	(0.02)	(2%)	1.04	1.05	(0.01)	(1%)	1.14	1.11	0.03	3%
AMTD	0.30	0.30	-	0.0%	0.93	0.93	-	0%	1.23	1.25	(0.02)	(2%)	1.35	1.45	(0.10)	(7%)
Avg				0.0%				(0%)				5%				7%
Median				0.0%				0%				(0%)				4%
Market Structure																
VIRT	0.24	0.24	-	0.0%	0.96	0.96	-	0%	0.96	0.98	(0.02)	(2%)	0.96	1.00	(0.04)	(4%)
Coverage Overall																
Avg.				(1.0%)				2%				(3%)				(1%)
Median				0.0%				0%				(1%)				0%

Note: For OAK, EPS represents Adjusted Net income or ANI; Note 2: Consensus estimates for LM are on a GAAP basis; Note 3: Our 4Q18E TROW EPS represents GAAP EPS (not operating EPS) to make equivalent basis for comparison vs. consensus estimates.

Note 4: BrightSphere (BSIG) was formerly known as OM Asset Management (OMAM) which changed names in March 2018. Source: Company Data, Thomson Reuters, Morgan Stanley Research

Significant Price Target Changes

Traditional Asset Managers: Following sharp market moves in the 4th quarter, we mark to market traditional mgrs for the broad market pull-backs (i.e. S&P -14%, MSCI -15%, EM -10%). Asset managers' portfolio NAVs decline sharply on the back of: 1) challenged investment returns, and 2) risk-off investor sentiment that has worsened outflows (net new money growth). **Significantly lower AuM levels, weak outlook for asset flows, and negative operating leverage flow through to forward EPS. For the group, we are lowering PTs by -12% on average, and 2020 EBITDA by -14% on average.** We increasingly look towards EV/EBITDA for our valuation approach (with P/E as backstop) as the industry expects further consolidation and as balance sheet differences have become more pronounced. We have discussed in detail the methodology and historical EV/EBITDA multiples in our [2019 Outlook here](#). For firms priced for growth (i.e. BLK, TROW, WETF), we continue to use P/E as primary valuation approach.

1. **Virtus Investment Partners (VRTS) PT lowered to \$85 (from \$111, -23%):** driven by 2020 EBITDA down -25% on lower portfolio NAVs (-19%), and using slightly higher EV/EBITDA multiple of 5.3x, which reflects a 21% discount versus historical multiple of 6.7x on deterioration of organic growth
2. **Brightspire Investment Group (BSIG) PT lowered to \$11 (from \$14, -21%):** driven by 2020 EBITDA down -16% on lower portfolio NAVs (-14%) and slightly lower target EV/EBITDA multiple of 5.7x, which reflects a 21% discount versus historical multiple of 7.2x. BSIG is currently trading at 5.5x, with slight expansion on an improving flow trajectory
3. **Invesco (IVZ) PT lowered to \$18 (from \$22, -18%):** driven by 2020 EBITDA down -22% on lower portfolio NAVs (-13%) and target EV/EBITDA multiple of 6.6x, which reflects a 21% discount versus historical multiple of 8.4x on persistent outflows and deteriorating trajectory
4. **WisdomTree Investments (WETF) PT lowered to \$7.50 (from \$9.00, -17%):** driven by 2020 EPS down -18% on lower portfolio NAVs (-9%) and lower P/E multiple of 22x (vs 26x prior and historical of 28x); WETF currently trading at 19.3x P/E, with slight expansion for inflection to inflows
5. **Legg Mason (LM) PT lowered to \$22 (from \$25, -12%):** driven by 2020 EBITDA down -11% on lower portfolio NAVs (-6%) and target EV/EBITDA multiple of 7.2x, which reflects a 5% discount to historical multiple of 7.5x. LM is currently trading at 7.7x (above historical multiple), with contraction towards peer average of 6.8x given growth headwinds
6. **Waddell & Reed Financial (WDR) PT lowered to \$15 (from \$17, -12%):** driven by 2020 EBITDA down -11% on lower portfolio NAVs (-12%), and marginally lower target EV/EBITDA multiple of 5.5x (vs 5.6x prior); New target multiple of 5.5x is a 28% discount to historical average of 7.6x on outlook for fee cuts and secular headwinds

Exhibit 8: New vs. Old 2020 Target EV/EBITDA Multiple

Ticker	2020E Target EV/EBITDA			
	New	Old	Chg	% Chg
Traditionals				
BEN	4.7x	5.1x	-0.4x	-8.3%
BLK	12.7x	12.3x	0.4x	3.1%
HLNE	15.1x	16.1x	-1.0x	-6.2%
IVZ	6.6x	6.2x	0.4x	7.1%
LM	7.2x	6.8x	0.3x	5.0%
BSIG	5.7x	5.9x	-0.2x	-3.9%
TROW	10.3x	9.5x	0.8x	8.0%
VCTR	3.4x	3.2x	0.1x	4.5%
VRTS	5.3x	4.9x	0.4x	8.8%
WDR	5.5x	5.6x	-0.1x	-2.2%
WETF	14.4x	14.5x	-0.1x	-0.6%
Avg (ex HLNE, WETF)	6.8x	6.6x	0.2x	2.5%
Median (ex HLNE, WETF)	5.7x	5.9x	0.3x	4.5%

Source: Company Data, Thomson Reuters, Morgan Stanley Research

Exhibit 9: New vs. Old EBITDA (\$M)

Ticker	4Q18E EBITDA				2018E EBITDA				2019E EBITDA				2020E EBITDA			
	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg
Traditionals																
BEN	349	530	(181)	-34.2%	2,100	2,280	(180)	-7.9%	1,669	2,015	(346)	-17.2%	1,727	1,880	(153)	-8.1%
BLK	1,470	1,539	(69)	-4.5%	5,979	6,038	(58)	-1.0%	5,745	6,141	(396)	-6.4%	6,122	6,642	(520)	-7.8%
HLNE	26	30	(3)	-10.9%	48	48	-	0.0%	27	29	(2)	-6.2%	39	34	5	14.6%
IVZ	307	418	(111)	-26.6%	1,463	1,574	(111)	-7.1%	1,278	1,578	(301)	-19.0%	1,307	1,669	(362)	-21.7%
LM	128	154	(25)	-16.5%	159	159	-	0.0%	141	154	(13)	-8.4%	125	139	(15)	-10.6%
BSIG	66	66	0	0.1%	289	289	0	0.0%	231	264	(33)	-12.5%	234	279	(45)	-16.1%
TROW	570	671	(101)	-15.0%	2,580	2,681	(101)	-3.8%	2,110	2,589	(479)	-18.5%	2,151	2,505	(355)	-14.2%
VCTR	40	42	(2)	-5.0%	164	169	(5)	-3.0%	244	280	(36)	-13.0%	378	417	(39)	-9.4%
VRTS	(14)	56	(70)	-124.9%	124	192	(68)	-35.4%	166	217	(51)	-23.6%	156	208	(52)	-25.0%
WDR	63	67	(4)	-5.9%	261	265	(4)	-1.5%	193	224	(31)	-13.7%	192	217	(24)	-11.2%
WETF	15	17	(2)	-11.1%	75	76	(2)	-2.4%	65	77	(12)	-16.1%	76	95	(19)	-19.6%
Avg (ex HLNE, WETF)				-25.8%				-6.6%				-14.7%				-13.8%
Median (ex HLNE, WETF)				-15.0%				-3.0%				-13.7%				-11.2%

Note: HLNE, VCTR are on Adjusted EBITDA

Source: Company Data, Thomson Reuters, Morgan Stanley Research

Significant Price Target Changes (cont.)

Alternative Asset Managers: Consistent with our view post 3Q earnings, portfolio monetization activity may face delays in 2019 from a choppy market backdrop, which could lead to lower earnings and dividends, weighing on investor sentiment and valuations. We expect weak marks in 4Q18, and below historical returns persisting into 2019. Alts' PE portfolios historically returned mid-teens after fees, but we expect returns to be high single digits for the year ahead. **In 4Q18, public portfolio holdings were down an estimated -20.8% on average across the group, and we expect private holdings to be marked low single digits, resulting in an average total PE return of -4.5%.** Looking forward, we lower 2019 EPS estimates by -21% and 2020 EPS by -9% on average. As a result our price targets decline by -12% on average with larger declines at APO, BX, CG, and KKR from increased earnings and valuation risk. We value the Alts using a SOTP valuation approach, supported by P/E; for KKR we use a P/B valuation approach, supported by SOTP and P/E.

1. **Apollo Global Management (APO) PT lowered to \$28 (from \$34, -18%):** New target P/E multiple of 8.7x, which reflects a 7% discount to historical of 9.4x. This is an inflection from prior valuation of 7% premium to historical, primarily driven by weaker portfolio marks and slowing portfolio monetization activity that weigh on valuation.
2. **The Blackstone Group (BX) PT lowered to \$36 (from \$42, -14%):** New target P/E multiple of 10.6x (versus 9.8x historical average) reflects contraction from current 12.8x P/E on 2019 EPS on weaker portfolio marks near-term, and a 8% premium to historical of 9.8x FY2 P/E multiple reflecting accelerating asset gathering and management fee growth
3. **The Carlyle Group (CG) PT lowered to \$19 (from \$23, -17%):** New target P/E multiple of 6.6x reflects 18% discount to historical of 8.1x given fundraising set to slow; skew to performance fees that's likely to weigh on near-term portfolio marks and earnings, and likely see weak portfolio monetization activity
4. **KKR & CO (KKR) PT lowered to \$22 (from \$25, -12%):** New target P/E multiple of 11.5x on realized EPS while not comparable to historical multiple of 8.2x on mark to market EPS, we note that our comparable mark to market eps of \$2.99 implies a 7.4x multiple which is a 10% discount on growing balance sheet markdown concerns and slowing monetization trajectory

Exhibit 10: New vs Old 2020e Target P/E Multiple

Ticker	2020E Target P/E Multiple			
	New	Old	Chg	% Chg
Alts				
APO	8.7x	10.1x	-1.4x	-13.4%
ARES	12.9x	12.4x	0.5x	4.4%
BX	10.6x	12.5x	-2.0x	-15.7%
CG	6.6x	6.4x	0.2x	3.5%
KKR	11.5x	11.6x	0.0x	-0.1%
OAK	14.8x	13.4x	1.4x	10.6%
Avg	10.9x	11.1x	-0.2x	-1.8%
Median	11.1x	12.0x	0.1x	1.7%

Source: Company Data, Morgan Stanley Research

Traditionals Key Metrics: New vs. Old

Exhibit 11: New vs. Old Market Performance

Ticker	3Q18 Mkt. Perf. (\$B) Actual	4Q18E Mkt. Perf.			2018E Mkt. Perf. (\$B)			2019E Mkt. Perf. (\$B)			2020E Mkt. Perf. (\$B)		
		New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP
Traditionals													
BEN	6.4	(46.1)	7.3	-6.5%	(59.6)	(6.2)	-8.0%	(13.5)	28.9	-2.1%	26.3	29.2	4.3%
BLK	134.6	(435.7)	69.5	-7.3%	(328.4)	176.8	-5.6%	258.0	291.0	4.6%	275.8	311.3	4.5%
HLNE	(0.1)	-	-	0.0%	(78.0)	(78.0)	-0.3%	-	-	0.0%	-	-	0.0%
IVZ	14.3	(97.4)	10.8	-9.9%	(85.0)	23.2	-9.1%	36.0	42.7	4.2%	38.0	45.5	4.3%
LM	8.8	(35.5)	5.9	-4.6%	(36.0)	5.4	-4.7%	21.4	23.9	3.0%	22.2	24.9	3.0%
BSIG	6.0	(24.9)	3.4	-10.5%	(23.9)	4.4	-9.8%	12.1	14.0	5.8%	12.3	14.4	5.8%
TROW	36.2	(107.3)	13.9	-10.1%	(37.1)	84.1	-3.8%	49.7	57.2	5.2%	51.3	59.8	5.1%
VCTR	2.1	(11.0)	0.9	-16.4%	(7.8)	4.2	-12.3%	4.0	4.7	6.2%	6.2	7.0	4.2%
VRTS	2.5	(8.6)	1.1	-8.3%	(5.0)	4.7	-5.6%	3.9	4.7	4.3%	3.6	4.4	3.9%
WDR	2.9	(7.7)	1.0	-9.7%	(2.6)	6.1	-3.2%	3.4	3.9	5.0%	3.4	3.9	5.0%
WETF	0.4	(4.2)	0.7	-7.1%	(6.9)	(2.0)	-14.2%	2.6	2.9	4.7%	2.7	3.1	4.5%
Avg (Ex-HLNE & WETF)				-9.2%			-6.9%			4.0%			4.4%
Median (Ex-HLNE & WETF)				-9.7%			-5.6%			4.6%			4.3%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 12: New vs. Old Long-Term Net Flows

Ticker	3Q18 LT Flows (\$B) Actual	4Q18e LT Flows			2018E LT Flows			2019E LT Flows			2020E LT Flows		
		New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP	New (\$B)	Old (\$B)	New as a % of BoP
Traditionals													
BEN	(13.6)	(9.3)	(9.7)	-1.3%	(45.0)	(45.4)	-6.0%	(21.2)	(21.2)	-3.3%	(12.2)	(8.4)	-2.0%
BLK	10.6	26.9	47.0	0.4%	106.6	126.7	1.8%	273.2	307.2	4.9%	336.9	377.3	5.5%
HLNE	1.2	1.0	0.8	3.0%	3.0	2.8	10.1%	4.4	4.4	13.5%	3.6	3.6	9.8%
IVZ	(11.8)	(22.4)	(16.9)	-2.5%	(42.3)	(36.8)	-4.9%	(16.6)	(4.5)	-2.1%	(3.9)	0.6	-0.5%
LM	(1.0)	(4.4)	(0.4)	-0.6%	(5.1)	(1.1)	-0.7%	2.7	3.8	0.4%	4.2	6.6	0.6%
BSIG	(2.6)	(4.8)	(2.9)	-2.0%	(9.6)	(7.7)	-3.9%	(6.5)	(4.0)	-3.1%	(3.5)	(1.7)	-1.7%
TROW	2.7	(8.6)	(10.7)	-0.8%	13.0	10.9	1.3%	4.4	26.2	0.5%	2.3	10.9	0.2%
VCTR	(0.7)	(0.7)	(0.3)	-1.1%	(2.1)	(1.7)	-3.6%	0.3	0.3	0.7%	2.1	2.1	2.2%
VRTS	0.5	(5.0)	0.0	-4.8%	(4.0)	1.1	-4.5%	(2.3)	1.1	-2.5%	(0.4)	2.1	-0.4%
WDR	(1.9)	(3.3)	(3.8)	-4.3%	(9.7)	(10.2)	-12.2%	(4.8)	(5.4)	-7.2%	(2.5)	(2.1)	-3.8%
WETF	(1.3)	0.7	0.6	1.2%	(4.0)	(4.2)	-8.2%	2.8	2.9	5.0%	4.0	4.6	6.5%
Avg (Ex-HLNE & WETF)				-1.9%			-3.6%			-1.3%			0.0%
Median (Ex-HLNE & WETF)				-1.3%			-3.9%			-2.1%			-0.4%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 13: New vs. Old Net Operating Margin

Ticker	3Q18 Op. Actual	4Q18e Adj. Op. Margin			2018E Adj. Op. Margin			2019E Adj. Op. Margin			2019E Adj. Op. Margin		
		New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg
Traditionals													
BEN	46.1%	41.8%	45.7%	-383 bp	46.8%	47.6%	-72 bp	40.5%	44.0%	-349 bp	40.4%	41.8%	-141 bp
BLK	44.1%	44.6%	44.4%	26 bp	44.4%	44.3%	6 bp	44.7%	44.4%	31 bp	45.0%	45.1%	-13 bp
HLNE	42.4%	41.5%	42.4%	-91 bp	48.2%	48.3%	-6 bp	41.9%	42.2%	-29 bp	42.2%	41.9%	34 bp
IVZ	37.0%	37.7%	39.8%	-209 bp	37.7%	38.2%	-52 bp	34.7%	37.1%	-245 bp	35.3%	37.4%	-205 bp
LM	21.5%	22.4%	22.6%	-15 bp	22.0%	22.0%	-4 bp	21.4%	21.9%	-43 bp	20.4%	21.0%	-56 bp
BSIG	38.4%	34.9%	34.9%	-1 bp	38.0%	37.9%	3 bp	34.7%	36.1%	-140 bp	34.4%	36.0%	-160 bp
TROW	48.4%	46.5%	47.8%	-126 bp	47.0%	47.4%	-32 bp	41.7%	46.3%	-463 bp	42.3%	43.8%	-154 bp
VCTR	39.2%	39.2%	39.1%	6 bp	38.5%	38.5%	-0 bp	40.1%	40.5%	-41 bp	44.6%	44.7%	-10 bp
VRTS	37.5%	35.5%	36.5%	-97 bp	34.5%	34.8%	-28 bp	31.7%	35.3%	-363 bp	31.6%	35.0%	-340 bp
WDR	33.3%	33.2%	34.8%	-157 bp	33.0%	33.4%	-39 bp	26.9%	29.6%	-270 bp	26.7%	28.5%	-182 bp
WETF	27.9%	26.3%	27.4%	-113 bp	27.1%	27.4%	-28 bp	26.6%	28.6%	-202 bp	28.6%	32.0%	-346 bp
Avg (Ex-HLNE & WETF)	38.4%			-106 bp			-24 bp			-209 bp			-140 bp
Median (Ex-HLNE & WETF)	38.4%			-97 bp			-28 bp			-245 bp			-154 bp

Source: Company Data, Morgan Stanley Research estimates

Exhibit 14: Fund Flow Dashboard: We forecast average annualized organic growth of -3.4% in 3Q18, -2.2% in 2018

Ticker	Long-term Flows						Avg Long-Term AuM Growth				Operating Margin (% Net Rev)			
	3Q18 Actual		4Q18e		2018e		3Q18	4Q18e	2018e	2019e	3Q18	4Q18e	2018e	2019e
	(\$B)	(% Ann.)	(\$B)	(% Ann.)	(\$B)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
BEN	(\$13.6)	(7.6%)	(\$9.3)	(5.3%)	(\$45.0)	(6.0%)	(1.0%)	(4.9%)	(2.0%)	(11.2%)	40.4%	40.4%	52.4%	40.5%
BLK	\$10.6	0.7%	\$26.9	1.8%	\$106.6	1.8%	1.1%	(2.0%)	10.9%	(1.0%)	44.2%	44.2%	44.2%	44.7%
IVZ	(\$11.8)	(5.3%)	(\$22.4)	(10.0%)	(\$42.3)	(4.9%)	0.8%	(7.1%)	9.7%	(10.0%)	33.7%	33.7%	39.4%	34.7%
LM	(\$1.0)	(0.6%)	(\$4.4)	(2.5%)	(\$5.1)	(0.7%)	0.3%	(2.5%)	1.7%	3.7%	22.6%	22.6%	21.9%	21.4%
BSIG	(\$2.6)	(4.4%)	(\$4.8)	(8.0%)	(\$9.6)	(3.9%)	(0.5%)	(4.2%)	(2.5%)	(10.5%)	33.7%	33.7%	38.1%	34.7%
TROW	\$2.7	1.1%	(\$8.6)	(3.2%)	\$13.0	1.3%	3.5%	(2.7%)	15.1%	(4.7%)	41.3%	41.3%	45.4%	41.7%
VRTS	\$0.5	2.2%	(\$5.0)	(19.4%)	(\$4.0)	(4.5%)	15.2%	(5.1%)	34.3%	(3.9%)	29.3%	29.3%	30.9%	31.7%
WDR	(\$1.9)	(10.0%)	(\$3.3)	(17.0%)	(\$9.7)	(12.2%)	(1.3%)	(2.4%)	(9.3%)	(7.5%)	28.1%	28.1%	30.5%	26.9%
VCTR	(\$0.7)	(4.4%)	(\$0.7)	(4.3%)	(\$2.1)	(3.6%)	2.3%	(9.3%)	6.2%	57.7%	36.3%	36.3%	35.4%	40.1%
Avg ex WETF and HLNE	(3.1%)		(7.6%)		(3.6%)		2.3%	(4.5%)	7.1%	1.4%	34.4%	34.4%	37.6%	35.1%
WETF	(\$1.3)	(8.4%)	\$0.7	4.7%	(\$4.0)	(8.2%)	(3.0%)	(4.2%)	25.1%	3.5%	24.3%	24.3%	24.6%	26.6%
HLNE	\$1.2	15.3%	\$0.8	10.0%	\$2.8	9.5%	1.5%	3.0%	11.1%	11.5%	42.4%	41.3%	48.3%	42.2%

Source: Company Data, Morgan Stanley Research estimates. Simfund, Morningstar, Thomson Reuters

Exhibit 15: Management Fee Rates

Management Fee Rates						
	4Q18e	3Q18	4Q17	Q/Q Change	Y/Y Change	
BEN	0.575%	0.580%	0.587%	-0.5 bps	-1.2 bps	
BLK	0.174%	0.179%	0.187%	-0.4 bps	-1.3 bps	
IVZ	0.430%	0.435%	0.477%	-0.5 bps	-4.7 bps	
TROW	0.466%	0.467%	0.470%	-0.1 bps	-0.4 bps	
BSIG	0.371%	0.384%	0.392%	-1.3 bps	-2.1 bps	
VCTR	0.582%	0.577%	0.586%	0.6 bps	-0.4 bps	
VRTS	0.046%	0.047%	0.045%	-0.2 bps	0.0 bps	
LM	0.339%	0.341%	0.340%	-0.2 bps	-0.1 bps	
WDR	0.637%	0.646%	0.665%	-0.8 bps	-2.8 bps	
WETF	0.047%	0.048%	0.050%	-0.1 bps	-0.3 bps	
HLNE	0.574%	0.569%	0.531%	0.4 bps	4.3 bps	
Average (ex WETF and HLNE)	0.402%	0.406%	0.417%	-0.4 bps	-1.4 bps	
Median (ex HLNE)	0.401%	0.409%	0.431%	-0.3 bps	-0.8 bps	

Source: Company data, Morgan Stanley Research estimates

Exhibit 16: Net Revenues

Net Revenues (\$mm)					
	4Q18e	3Q18	4Q17	Q/Q Change	Y/Y Change
BEN	833.7	1,037.5	1,086.8	-19.6%	-23.3%
BLK	3,059.3	3,168.0	3,331.0	-3.4%	-8.2%
IVZ	900.5	966.9	1,004.9	-6.9%	-10.4%
TROW	1,281.8	1,323.2	1,217.9	-3.1%	5.2%
BSIG	216.5	228.6	252.3	-5.3%	-14.2%
VCTR	76.6	83.8	80.4	-8.6%	-4.8%
VRTS	117.1	126.8	107.7	-7.6%	8.8%
LM	612.3	643.9	668.8	-4.9%	-8.5%
WDR	172.2	178.5	186.6	-3.5%	-7.7%
WETF	67.9	72.6	61.0	-6.4%	11.4%
HLNE	57.4	55.8	65.0	2.9%	-11.6%
Average (ex WETF and HLNE)				-7.0%	-7.0%
Median (ex HLNE)				-5.9%	-7.9%

Source: Company data, Morgan Stanley Research estimates

Exhibit 17: Expenses Ex-Distribution

Total Expenses Ex-Distribution (\$mm)					
	4Q18e	3Q18	4Q17	Q/Q Change	Y/Y Change
BEN	542.9	558.8	505.7	-2.8%	7.4%
BLK	1,805.9	1,772.0	1,846.0	1.9%	-2.2%
IVZ	581.7	609.1	605.7	-4.5%	-4.0%
TROW	694.5	682.6	686.9	1.7%	1.1%
BSIG	147.3	140.8	154.4	4.6%	-4.6%
VCTR	51.2	52.0	53.5	-1.5%	-4.3%
VRTS	89.0	92.9	79.7	-4.1%	11.8%
LM	487.7	505.8	499.9	-3.6%	-2.4%
WDR	114.7	119.1	124.8	-3.6%	-8.1%
WETF	50.3	50.4	50.9	-0.3%	-1.3%
HLNE	33.6	32.1	29.9	4.6%	12.3%
Average (ex WETF and HLNE)				-1.3%	-0.6%
Median (ex HLNE)				-2.2%	-2.3%

Source: Company data, Morgan Stanley Research estimates, Note BSIG, WETF and HLNE do not break out distribution expense so numbers reflect Total Expenses.

Exhibit 18: Operating Income

Operating Income (\$mm)					
	4Q18e	3Q18	4Q17	Q/Q Change	Y/Y Change
BEN	348.8	478.7	581.1	-27.1%	-40.0%
BLK	1,365.7	1,396.0	1,485.0	-2.2%	-8.0%
IVZ	339.4	357.8	399.2	-5.1%	-15.0%
TROW	596.6	640.6	531.0	-6.9%	12.4%
BSIG	75.6	87.8	97.9	-13.8%	-22.7%
VCTR	38.9	42.4	38.7	-8.4%	0.4%
VRTS	42.0	48.2	39.0	-12.8%	7.7%
LM	137.2	138.1	169.0	-0.7%	-18.8%
WDR	57.2	59.5	61.8	-3.9%	-7.5%
WETF	17.8	20.3	10.4	-11.9%	70.8%
HLNE	23.8	23.7	35.1	0.6%	-32.1%
Average (ex WETF and HLNE)				-9.0%	-10.2%
Median (ex HLNE)				-7.6%	-7.8%

Source: Company data, Morgan Stanley Research estimates; Note: VRTS shows adjusted operating income

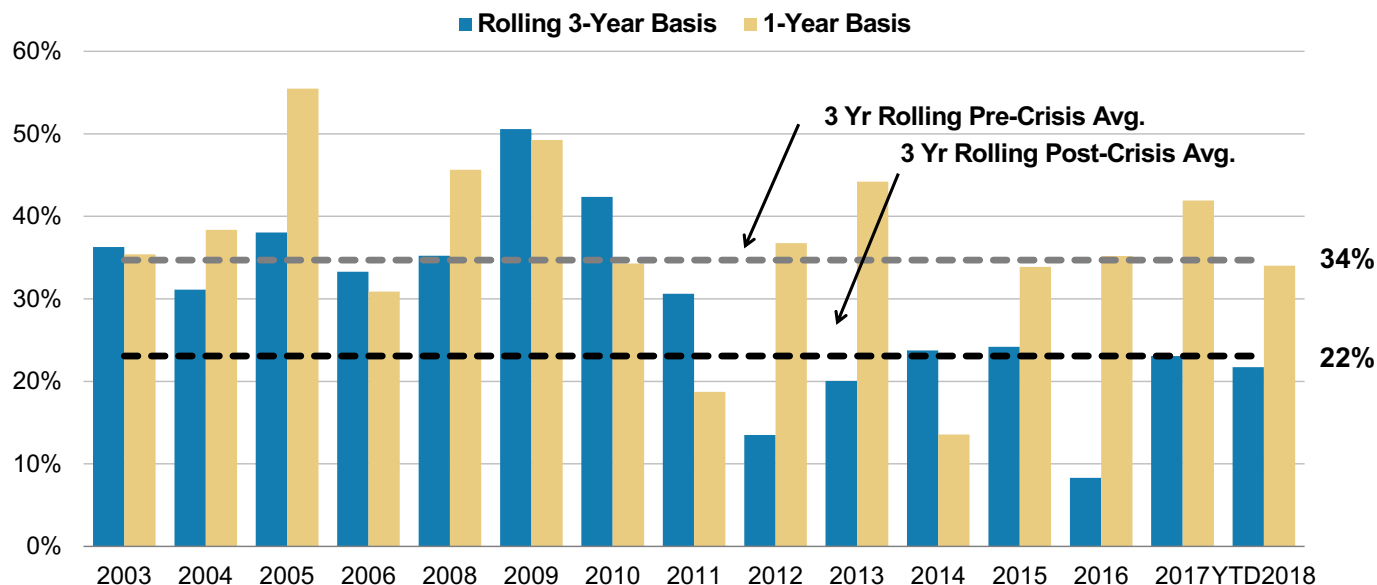
Exhibit 19: Diluted Share Count

Share Count (mm)					
	4Q18e	3Q18	4Q17	Q/Q Change	Y/Y Change
BEN	510.9	521.5	550.7	-2.0%	-7.2%
BLK	160.6	161.4	163.8	-0.5%	-1.9%
IVZ	405.1	414.4	410.6	-2.2%	-1.3%
TROW	246.3	247.5	247.7	-0.5%	-0.6%
BSIG	103.5	106.6	110.6	-2.9%	-6.5%
VCTR	72.0	71.9	59.8	0.1%	20.4%
VRTS	8.5	8.5	7.4	0.0%	13.8%
LM	86.0	85.6	90.8	0.4%	-5.3%
WDR	78.8	79.6	83.1	-1.0%	-5.2%
WETF	167.4	166.6	136.6	0.5%	22.6%
HLNE	53.3	53.4	53.2	-0.1%	0.3%
Average (ex WETF and HLNE)				-1.0%	0.7%
Median (ex HLNE)				-0.5%	-1.6%

Source: Company data, Morgan Stanley Research estimates

Exhibit 20: The % of Large Cap Equity managers beating the benchmark on a rolling 1 year basis has declined to just 34%, down from 42% at year end 2017.

% of Domestic Large Cap MFs Beating the S&P 500: 2003 - YTD2018



Source: S&P Dow Jones, Morningstar, Morgan Stanley Research. YTD 2018 through November 2018. 1 Yr Basis is a trailing 1 Yr.

Traditionals Key Charts: Valuation

Exhibit 21: FY2 P/E Multiples vs. EPS Growth

Covered Trad. AMs' FY2 P/E and EPS Growth

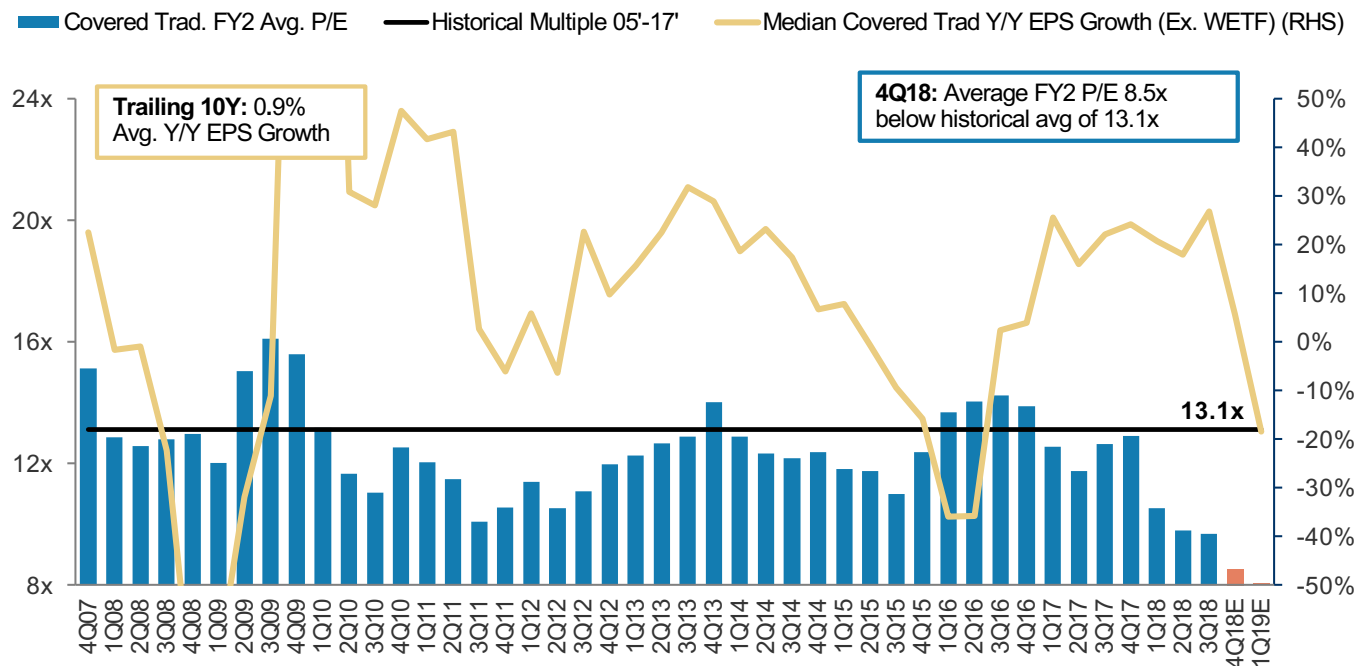
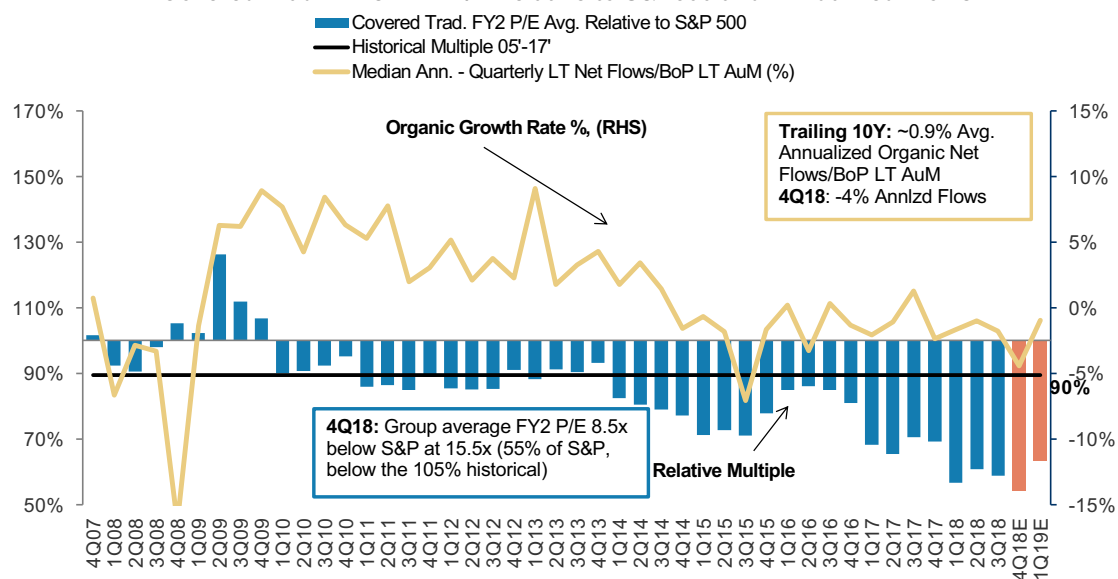


Exhibit 22: FY2 P/E Relative to S&P 500 and Annualized Flows

Covered Trad. AMs' FY2 P/E Relative to S&P500 and Annualized Flows



Brokers Key Metrics: New vs. Old

Exhibit 23: New vs. Old Operating Margin

Ticker	3Q18 Op. Margin Actual	4Q18e Adj. Op. Margin			2018E Adj. Op. Margin			2019E Adj. Op. Margin			2020E Adj. Op. Margin		
		New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg
Brokers													
SCHW	47.3%	45.8%	46.2%	-35 bp	45.2%	45.3%	-10 bp	46.8%	48.4%	-162 bp	47.0%	48.1%	-107 bp
ETFC	47.2%	48.4%	47.7%	77 bp	46.5%	46.1%	41 bp	47.3%	46.4%	91 bp	46.7%	48.0%	-136 bp
LPLA	11.1%	11.0%	11.0%	7 bp	11.1%	11.1%	2 bp	11.2%	12.2%	-91 bp	11.7%	12.6%	-93 bp
AMTD	45.4%	50.0%	51.0%	-93 bp	42.3%	42.6%	-28 bp	48.7%	50.8%	-210 bp	50.5%	52.7%	-219 bp
Average	37.7%	38.8%	38.9%	-11 bp	36.3%	36.3%	1 bp	38.5%	39.4%	-93 bp	39.0%	40.4%	-139 bp
Median	46.3%	47.1%	46.9%	-14 bp	43.7%	43.9%	-4 bp	47.0%	47.4%	-127 bp	46.8%	48.0%	-122 bp

Source: Company Data, Morgan Stanley Research estimates

Exhibit 24: New vs. Old Organic Growth

Ticker	3Q18 Net New Assets		4Q18 Net New Assets					2018E Net New Assets					2019E Net New Assets					2020E Net New Assets				
	Net New Assets Actual (\$B)	As a % of BoP AuM	New (\$B)	Old (\$B)	Chg (\$B)	New as a % of BoP AuM	Old as a % of BoP AuM	New (\$B)	Old (\$B)	Chg (\$B)	New as a % of BoP AuM	Old as a % of BoP AuM	New (\$B)	Old (\$B)	Chg (\$B)	New as a % of BoP AuM	Old as a % of BoP AuM	New (\$B)	Old (\$B)	Chg (\$B)	New as a % of BoP AuM	Old as a % of BoP AuM
Brokers																						
SCHW	53.5	6.3%	49.9	71.3	(21.4)	5.6%	8.0%	128.5	149.9	(21.4)	6.6%	7.3%	231.9	248.4	(16.4)	6.8%	6.8%	254.3	272.4	(18.1)	6.7%	6.7%
ETFC	3.4	3.1%	3.5	5.3	(1.8)	3.2%	4.8%	14.6	16.4	(1.8)	3.8%	4.3%	18.3	20.4	(2.2)	4.4%	4.4%	26.4	29.5	(3.1)	5.7%	5.7%
LPLA	4.3	2.6%	7.6	1.6	6.0	4.5%	1.0%	15.7	9.7	6.0	2.6%	1.6%	18.0	8.5	9.5	2.8%	1.2%	16.3	8.3	8.0	2.3%	1.1%
AMTD	23.9	7.8%	24.1	25.9	(1.8)	7.4%	8.0%	90.0	90.0	-	7.7%	7.9%	93.9	93.9	-	7.7%	7.7%	90.2	90.2	-	6.6%	6.6%
Average		5.0%				5.2%	5.4%				5.2%	5.2%				5.4%	5.0%				5.3%	5.0%
Median		4.7%				5.1%	6.4%				5.2%	5.8%				5.6%	5.6%				6.1%	6.1%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 25: New vs. Old Net Interest Margin

Ticker	3Q18 Net Interest Margin Actual	4Q18e Net Interest Margin			2018E Net Interest Margin			2019E Net Interest Margin			2020E Net Interest Margin		
		New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg	New	Old	Bps Chg
Brokers													
SCHW	2.33%	2.36%	2.37%	-1 bp	2.31%	2.30%	0 bp	2.42%	2.47%	-5 bp	2.43%	2.48%	-5 bp
ETFC	3.08%	3.15%	3.15%	-0 bp	3.06%	3.06%	-0 bp	3.17%	3.19%	-2 bp	3.04%	3.23%	-19 bp
LPLA	1.79%	1.89%	1.87%	2 bp	1.69%	1.69%	0 bp	1.93%	1.99%	-5 bp	1.93%	2.08%	-15 bp
AMTD	2.05%	2.14%	2.20%	-6 bp	2.01%	2.02%	-1 bp	2.18%	2.40%	-23 bp	2.23%	2.53%	-30 bp
Average	2.31%	2.39%	2.40%	-1 bp	2.27%	2.27%	-0 bp	2.42%	2.51%	-9 bp	2.41%	2.58%	-17 bp
Median	2.19%	2.25%	2.29%	-1 bp	2.16%	2.16%	0 bp	2.30%	2.44%	-5 bp	2.33%	2.51%	-17 bp

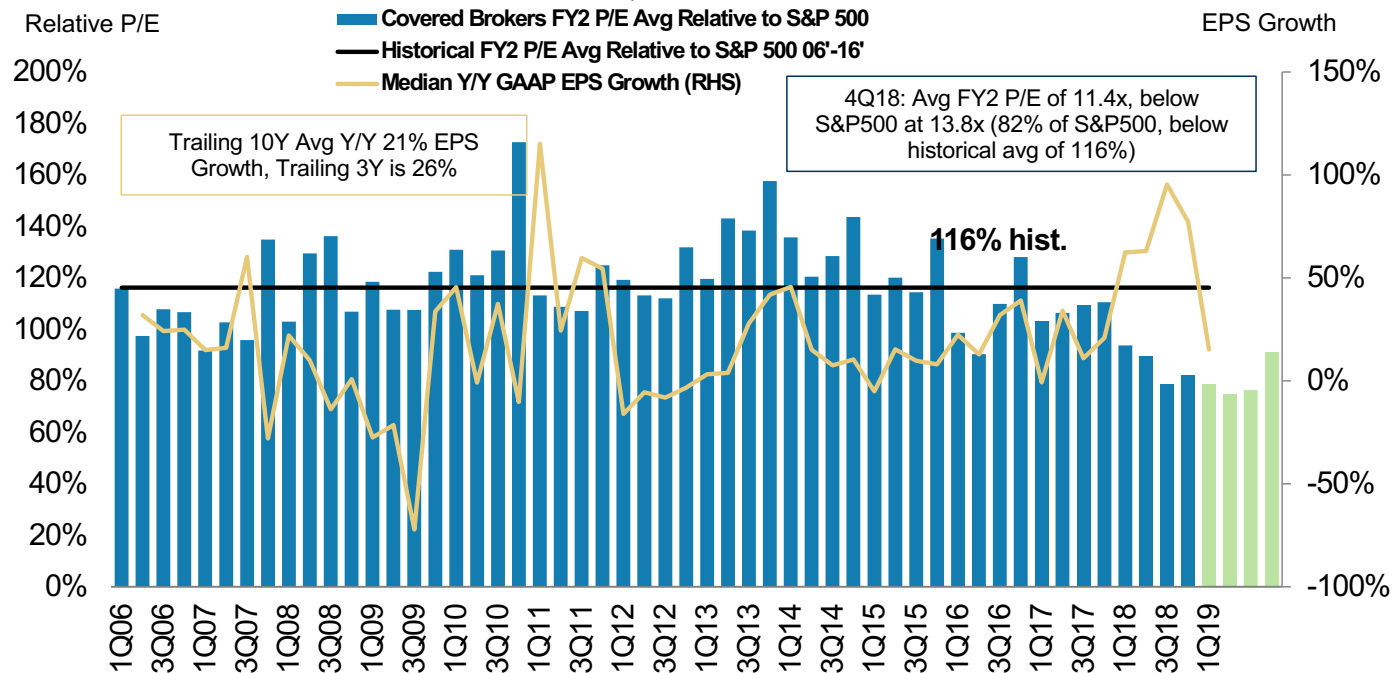
Source: Company Data, Morgan Stanley Research Estimates

Exhibit 26: New vs. Old DARTs (000s)

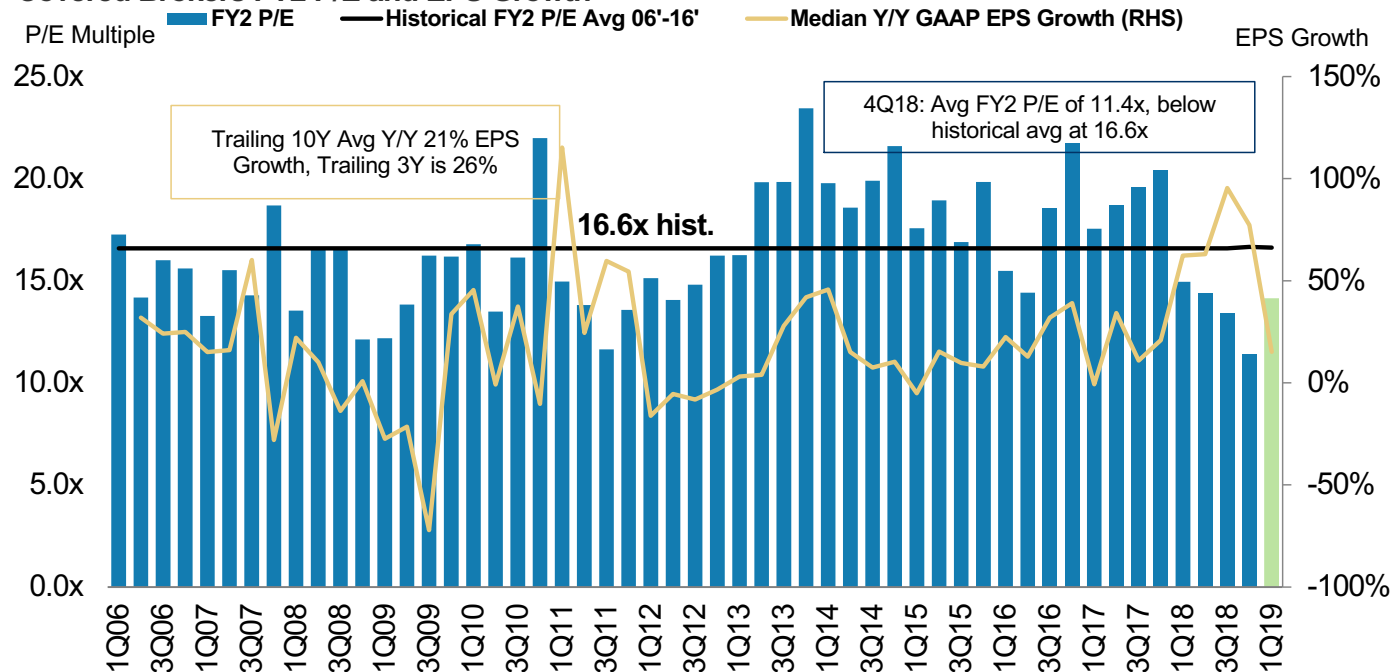
Ticker	3Q18 DARTs Actual	4Q18e DARTs			2018E DARTs			2019E DARTs			2020E DARTs		
		New	Old	% Change	New	Old	% Change	New	Old	% Change	New	Old	% Change
Brokers													
SCHW	382	455	437	4%	419	414	1%	401	403	0%	322	322	0%
ETFC	266	295	305	-3%	282	285	-1%	282	287	-2%	295	303	-3%
AMTD	784	929	944	-2%	861	865	0%	820	810	1%	825	815	1%
Average	477	560	562	0%	521	521	0%	501	500	0%	481	480	0%
Median	382	455	437	-2%	419	414	0%	401	403	0%	322	322	0%

Source: Company Data, Morgan Stanley Research estimates

Brokers Key Charts: Valuation

Exhibit 27: Covered Brokers FY2 P/E Relative to S&P500, and EPS Growth**Covered Brokers FY2 P/E Relative to S&P500, and EPS Growth**

Source: Company Data, Thomson Reuters, Morgan Stanley Research estimates

Exhibit 28: Covered Brokers FY2 P/E and EPS Growth**Covered Brokers FY2 P/E and EPS Growth**

Source: Company Data, Thomson Reuters, Morgan Stanley Research estimates

Alts Key Metrics:

Exhibit 29: Management Fee Rates

Management Fee Rates					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	0.651%	0.665%	0.665%	-1.4 bps	-1.4 bps
ARES	1.098%	1.085%	1.062%	1.3 bps	3.7 bps
BX	0.838%	0.848%	0.889%	-1.0 bps	-5.1 bps
CG	0.982%	0.959%	0.933%	2.3 bps	4.8 bps
KKR	0.781%	0.789%	0.805%	-0.8 bps	-2.3 bps
OAK	0.779%	0.777%	0.792%	0.2 bps	-1.3 bps
Average	0.855%	0.854%	0.858%	0.1 bps	-0.3 bps
Median	0.810%	0.819%	0.847%	-0.3 bps	-1.4 bps

Source: Company Data, Morgan Stanley Research estimates

Exhibit 30: Fee Related Earnings (FRE)

Fee Related Earnings					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	214.6	197.1	187.3	8.9%	14.6%
ARES	62.6	64.4	58.9	-2.9%	6.2%
BX	346.4	346.2	352.5	0.1%	-1.7%
CG	110.9	89.0	26.7	24.6%	315.5%
KKR	281.7	291.2	236.4	-3.3%	19.2%
OAK	55.2	56.3	81.8	-2.0%	-32.6%
Average				4.3%	53.5%
Median				-1.0%	10.4%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 31: Core Fee Related Earnings (FRE)

Core FRE (\$mm)					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	175	157	159	11.7%	10.2%
ARES	49	51	47	-3.3%	4.5%
BX	294	296	310	-0.7%	-5.2%
CG	56	35	(4)	58.1%	nm
KKR	132	125	131	5.9%	0.8%
OAK	41	43	68	-4.0%	-40.1%
Average				11.3%	-6.0%
Median				2.6%	0.8%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 32: Core FRE Margin

Core FRE Margin					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	44.1%	44.5%	46.3%	-37 bps	-221 bps
ARES	26.8%	28.3%	28.7%	-149 bps	-185 bps
BX	38.7%	38.0%	42.4%	73 bps	-363 bps
CG	14.2%	9.7%	-1.3%	453 bps	1554 bps
KKR	26.3%	24.8%	32.3%	150 bps	-603 bps
OAK	20.7%	21.6%	32.9%	-95 bps	-1226 bps
Average				65.9 bps	-174.1 bps
Median				17.8 bps	-292.0 bps

Source: Company Data, Morgan Stanley Research estimates

Exhibit 33: DE Pre-Tax

DE Pre Tax (\$mm)					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	217	245	328	-11.3%	-33.7%
ARES	71	85	55	-16.0%	29.5%
BX	720	802	1,319	-10.3%	-45.4%
CG	184	195	145	-5.5%	27.0%
KKR	671	635	475	5.7%	41.2%
OAK	155	144	152	8.2%	2.2%
Average				-4.9%	3.5%
Median				-7.9%	14.6%

Source: Company Data, Morgan Stanley Research estimates

Exhibit 34: Share Count

Share Count (mm)					
	4Q18E	3Q18	4Q17	Q/Q Change	Y/Y Change
APO	404	404	403	0.1%	0.2%
ARES	226	225	216	-0.2%	4.5%
BX	1,206	1,206	1,201	0.0%	0.4%
CG	346	346	343	0.1%	0.8%
KKR	835	829	821	-0.6%	1.6%
OAK	71	71	65	-0.2%	10.0%
Average				-0.1%	2.9%
Median				-0.1%	1.2%

Source: Company Data, Morgan Stanley Research estimates

Alts Cash Metrics

Exhibit 35: Est Cash Earnings (Pre-Tax) from 3Q18 Known Exits

4Q18E Cash Earnings Totals From Known Exits			
Company	Description	DE Impact Per Share	Fund Held In
APO	Secondaries	\$0.00	Fund VI, VII
ARES	Sales	\$0.04	US RE
BX	Secondaries, Sales	\$0.09	Various
CG	Sales, Secondaries	\$0.04	Various
KKR	Secondaries, Sales, Balance Sheet	\$0.41	NAXI
OAK	Secondaries	\$0.00	N/A

Source: Dealogic, Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 36: Estimated Known Exit Activity vs. MSe for Net Cash Carry

Known Exits vs. Model Estimates 4Q18			
		Models: Net Realized Cash	
	Known Exits Est	Carry	% of Total
APO	\$0.00	\$0.02	0.0%
ARES	\$0.03	\$0.04	59.3%
BX	\$0.09	\$0.27	34.2%
CG	\$0.04	\$0.22	18.1%
KKR	\$0.41	\$0.42	97.9%
OAK	\$0.00	\$0.48	0.0%

Source: Dealogic, Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research.

Exhibit 37: New vs. Old Cash Earnings (DE) (After-Tax)

Ticker	4Q18E Cash Earnings (DE)				2018E Cash Earnings (DE)				2019E Cash Earnings (DE)				2020E Cash Earnings (DE)			
	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg	New	Old	Chg	% Chg
APO	0.46	0.64	(0.18)	-27.8%	2.00	2.18	(0.18)	-8.1%	2.35	2.54	(0.19)	-7.4%	3.02	2.69	0.33	12.3%
ARES	0.27	0.45	(0.18)	-39.7%	1.32	1.50	(0.18)	-12.0%	1.34	1.52	(0.18)	-11.6%	1.60	1.79	(0.19)	-10.6%
BX	0.54	1.12	(0.58)	-51.8%	2.14	2.72	(0.58)	-21.3%	2.22	3.27	(1.05)	-32.2%	3.48	3.46	0.01	0.3%
CG	0.52	0.32	0.20	61.8%	1.73	1.53	0.20	12.9%	2.40	2.52	(0.12)	-4.7%	3.01	3.23	(0.23)	-7.0%
KKR	0.73	0.58	0.15	25.7%	2.31	2.16	0.15	6.9%	2.00	2.32	(0.32)	-13.7%	2.24	2.49	(0.26)	-10.3%
OAK	0.89	1.04	(0.15)	-14.4%	3.70	3.86	(0.16)	-4.1%	3.36	3.86	(0.50)	-12.9%	3.60	3.93	(0.33)	-8.4%
Avg.				-7.7%				-4.3%				-13.7%				-3.9%

Source: Company Data, Morgan Stanley Research estimates

Estimated AUM Appreciation by Business for the Alts

Exhibit 38: Estimated AUM Gross Appreciation by Business

BX									CG								
	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E		1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E
Private Equity									Private Equity								
Publics*	5.1%	4.0%	-5.8%	4.1%	-1.7%	6.9%	10.8%	-19.6%	Publics*	3.1%	3.1%	1.2%	16.8%	-3.4%	-4.5%	-19.5%	-15.4%
Privates*	6.2%	2.6%	4.8%	7.2%	9.1%	10.2%	6.4%	2.7%	Privates*	10.1%	8.9%	4.4%	6.7%	5.2%	4.1%	3.8%	-1.2%
Total PE	6.9%	2.8%	3.3%	6.8%	6.4%	9.5%	7.5%	-2.8%	Total PE	9.0%	8.0%	4.0%	8.0%	4.0%	3.0%	1.0%	-2.6%
Real Estate									Real Assets	5.4%	5.0%	1.7%	4.5%	2.2%	7.4%	3.5%	-6.5%
Publics	1.5%	3.6%	6.8%	2.8%	-2.0%	1.2%	-1.8%	-13.3%	Global Credit	0.6%	0.1%	0.0%	0.2%	0.3%	0.5%	0.2%	-2.1%
Privates	7.0%	5.6%	5.3%	5.5%	4.1%	2.7%	3.3%	3.3%	Carry Funds	7.0%	0.0%	0.0%	1.0%	2.0%	2.0%	1.0%	-8.0%
Total RE	5.5%	6.2%	5.8%	4.4%	4.4%	0.3%	3.2%	2.2%	Solutions	5.3%	7.9%	6.4%	6.1%	7.3%	2.8%	6.2%	2.8%
HF (BAAM)	2.7%	1.3%	2.3%	1.5%	1.3%	1.5%	1.7%	0.3%	Total Appreciation	4.6%	4.2%	2.1%	5.0%	2.7%	4.8%	2.7%	-2.3%
Credit (GSO)	3.2%	0.2%	3.4%	2.6%	1.5%	4.2%	1.1%	-1.0%									
Total Appreciation	3.5%	2.8%	3.0%	3.0%	2.1%	1.6%	2.5%	-0.2%	OAK								
APO																	
	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E		1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E
Private Equity									Closed End Funds								
Publics*	10.0%	1.9%	2.0%	6.6%	-16.2%	4.2%	6.8%	-28.2%	Publics*	12.6%	4.3%	0.0%	5.7%	-1.0%	3.7%	1.5%	-13.3%
Privates*	7.0%	1.9%	9.0%	9.9%	3.8%	0.6%	0.3%	0.9%	Privates*	0.0%	2.5%	3.3%	2.2%	1.8%	1.5%	2.6%	-1.1%
Total PE	8.0%	1.9%	7.3%	9.1%	-2.7%	1.7%	2.3%	-8.0%	Total CEF	2.6%	3.0%	2.6%	2.5%	1.5%	1.8%	2.4%	-2.9%
Real Estate	3.8%	5.0%	3.8%	1.0%	1.0%	3.7%	4.6%	1.2%	Open End Funds	2.5%	1.9%	2.0%	0.7%	-0.5%	-0.5%	1.8%	-4.8%
Credit	1.9%	2.1%	1.9%	2.2%	2.2%	1.3%	1.7%	-1.6%	Evergreen Funds	2.8%	2.2%	2.8%	1.6%	1.4%	4.0%	1.7%	-4.2%
Total Appreciation	1.8%	2.6%	2.3%	2.6%	-0.3%	-0.1%	0.6%	-1.3%	Total Appreciation	2.4%	2.3%	2.2%	1.5%	0.5%	0.9%	1.9%	-3.5%
KKR									ARES								
	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E		1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18E
Private Markets									Private Equity								
Publics*	4.2%	11.0%	5.2%	12.2%	-6.5%	11.3%	8.5%	-23.0%	Publics*	-3.5%	26.3%	-0.8%	17.7%	-2.1%	-2.3%	-25.2%	-25.1%
Privates*	5.0%	5.5%	3.3%	5.2%	4.1%	4.5%	6.0%	-2.1%	Privates*	2.6%	7.7%	2.0%	-1.8%	1.2%	0.8%	3.4%	1.8%
Total PM	5.0%	8.2%	4.8%	7.2%	1.1%	6.2%	7.6%	-9.8%	Total PE	1.9%	11.1%	1.4%	2.1%	0.6%	0.2%	-0.9%	-0.8%
Public Markets	2.0%	2.3%	1.1%	1.1%	1.2%	-0.5%	0.1%	0.0%	Real Estate	3.2%	7.7%	5.1%	4.8%	2.7%	-1.1%	4.5%	1.2%
Credit Drawdown	10.1%	1.4%	0.0%	-0.3%	3.2%	-1.1%	0.8%	-4.7%	Credit	1.2%	2.4%	2.0%	1.4%	1.8%	0.0%	1.0%	0.7%
Total Appreciation	3.4%	5.0%	2.7%	3.7%	1.1%	2.2%	2.8%	-4.1%	Total Appreciation	1.3%	4.1%	1.9%	1.6%	1.5%	-0.1%	0.7%	0.4%
Balance Sheet	4.1%	4.1%	0.3%	-0.4%	2.5%	7.8%	4.1%	-6.8%									

Note: These values reflect gross appreciation; *Public and private appreciation figures are Morgan Stanley estimates; Source: Company Data, Morgan Stanley Research estimates

Public Holdings and Marks for the Alts

Exhibit 39: Appreciation of Alt Public PE/RE Portfolios

Ticker	# of Publics	EOP Est. Fair Value	% of Carry Funds	Appreciation of Publics
KKR	20	\$9b	37%	-23%
APO	13	\$5b	31%	-28%
BX	12	\$11b	25%	-17%
OAK	21	\$3b	15%	-13%
CG	44	\$9b	13%	-24%
ARES	6	\$1b	10%	-25%
Avg			12%	-21%

Source: Thomson Reuters, Company Data. Note: Alts public portfolios marked as of 12/31/2018

Exhibit 40: APO Public Portfolio Holdings

APO				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
ADT	ADT	277.6	1,668.4	-35%
Vistra Energy	VST	30.0	686.7	-9%
OneMain	OMF	26.5	579.3	-34%
Presidio	PSDO.O	44.1	574.9	-12%
Talos Energy	TALO.K	19.2	313.3	0%
Caesars Entertainment	CZR.O	45.5	308.9	-33%
AGS	AGS	12.2	280.0	-20%
Exela Technologies	XELA.O	28.6	111.3	-44%
Welspun Corp	WGSR.NS	42.2	84.5	5%
Laureate Education	LAUR.O	3.4	51.8	1%
Warrior Met Coal	HCC	2.0	48.2	-14%
EP Energy	EPE	62.6	43.8	-71%
Norwegian	NCLH.K	-	-	-25%
		Total:	4,751.2	-28.2%
<i>Memo: Balance Sheet</i>				
Athene	ATH	19.2	764.7	-22.6%

Source: Thomson Reuters, Company Data; Note: Prices as of 12/31/2018

Exhibit 41: ARES Public Portfolio Holdings

ARES				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
Floor and Décor	FND	26.1	676.0	-15.1%
Smart & Final	SFS	44.2	209.6	-16.1%
Noble Resources	NBL	10.2	191.4	-40.9%
Ozner Water International	2014.HK	187.2	41.8	-3.4%
Halcon Resources	HK	18.0	30.6	-62.0%
California resources	CRC	1.6	27.3	-65.1%
		Total:	1,176.6	-25.1%

Source: Thomson Reuters, Company Data. Note: Alts public portfolios marked as of 12/31/2018

Exhibit 42: BX Public Portfolio Holdings

BX				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
PE (Including Tac Opps)				
Cheniere Energy Partners	CQP	100.0	3610.0	-8%
Gates	GTES.N	135.0	1787.4	-31%
NCR Preferred Shares	NCR	13.3	307.7	-17%
Crocs	CROX.O	6.9	179.3	24%
Kosmos Energy	KOS	41.6	169.1	-58%
Vivint Solar	VSLR.N	33.2	126.4	-27%
Intertrust	INTER.AS	6.3	106.1	-6%
Pacific Biosciences of California Inc	PACB.O	2.4	17.8	44%
		PE Sub Total:	6,303.9	-19.6%
Real Estate				
Invitation Homes	INVH.N	200.0	4016.0	-11%
CorePoint Lodging	CPLG.N	17.0	208.3	-36%
Blackstone Mortgage Trust	BXMT.N	0.7	20.8	-3%
D Carnegie & Co AB	CAR.ST^L08	35.6	80.1	
		RE Sub Total:	4,325.2	-13.3%
		Total:	10,629.1	-17.0%

Source: Thomson Reuters, Company Data; Note: Prices as of 12/31/2018

Exhibit 43: CG Public Portfolio Holdings

CG				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
PNB Housing Finance Ltd	PNBH.NS	49.6	658.0	-2.6%
Focus Media	002027.SZ	439.9	335.3	-38.4%
China Litterature	0772.HK	68.1	315.8	-26.2%
Tsubaki Nakashima	6464.T	18.1	266.3	-31.7%
Aruhi Corp	7198.T	13.0	235.0	-12.9%
NXP Semiconductors	NXPI.O	3.1	227.2	-13.5%
IIFL Holdings	IIFL.NS	28.8	208.5	-1.8%
Wesco Aircraft Holdings Inc	WAIR.N	23.1	182.5	-28.8%
OneSmart Education	ONE	23.2	180.6	-11.4%
Edelweiss Financial Services	EDEL.NS	68.0	178.2	-2.6%
China Logistics Property Holdings	1589.HK	286.5	105.7	5.5%
BankUnited Inc	BKU	3.4	103.2	-13.8%
Cyient	CYIE.NS	11.1	98.9	-17.7%
CommunityOne Bancorp	COB.O^J16	5.8	81.4	
Solasto Corporation	6197.T	4.3	42.8	-24.4%
SouFun Holdings	SFUN.K	12.3	17.6	-43.3%
Artgo Mining Holdings	3313.HK	321.9	15.6	31.0%
Concord Med Services	CCM	4.4	15.5	-1.1%
South Indian Bank	SIBK.NS	66.5	14.9	13.1%
Uju Electronics Co	065680.KQ	1.1	7.8	-10.7%
Tenwow International	1219.HK	116.2	5.6	
Sequential Brands Group Inc	SQBG.O	6.4	5.1	-52.7%
Microport Scientific	0853.hk	-	-	-25.7%
Private Equity				
		PE Sub Total:	2,643.6	-15.4%
Real Assets				
Coresite Realty	COR	11.5	1,005.8	-19.4%
Enviva Partners LP	EVA	33.5	931.0	-11.9%
WildHorse Resource Development Corp.	WRD	54.2	764.1	-39.4%
Liberty Oilfield Services	LBRT.N	55.0	712.3	-42.6%
Pattern Energy Group Holdings	PEGI.O	33.1	616.5	-3.2%
USA Compression	USAC.N	28.4	368.5	-21.2%
Talen Energy Corp	TLN^L16	19.5	273.2	0.0%
HighPoint Resources	HPR	64.7	161.1	-49.0%
Centennial Resource Development	CDEV.O	12.1	132.9	-49.6%
NISKA GAS STORAGE PARTNERS LLC	NKA^G16	20.5	86.2	0.0%
Natural Resources Partners LP	NRP	2.0	76.6	22.6%
Rice Energy Inc	RICE.N^K17	2.5	72.2	0.0%
RTI Intl Metals Inc	RTI^G15	2.0	57.4	0.0%
New Century Real Estate Investment Trust	1275.HK	218.4	48.0	-5.5%
Terraform Power Inc	TERP.O	3.5	38.9	-1.5%
Fang Holdings	SFUN.K	12.3	17.6	-43.3%
Enduro Royalty Trust	PVL.N	8.6	16.2	-46.2%
China Recycling Energy Corp	CREG.O	5.5	4.1	-37.5%
Superior Energy Services Inc	SPN	0.9	3.1	-67.1%
Cobalt International Energy	CIEIQ.PK^D18	34.8	1.1	
Weatherford International Ltd	WFT.N	1.0	0.6	-80.1%
		RA Sub Total:	5,387.2	-28.6%
		Total:	8,030.7	-24.0%

Source: Thomson Reuters, Company Data; Note: Prices as of 12/31/2018

Exhibit 44: KKR Public Portfolio Holdings

KKR				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
First Data Corporation	FDC	155.8	2,634.6	-30%
PRA Health Sciences	PRAH.O	11.5	1,057.5	-17%
National Vision	EYE.O	20.5	576.8	-37%
NGILITY	EGL	18.8	534.9	-19%
Brightview	BV	50.4	514.8	-33%
Gardner Denver	GDI	25.0	511.3	-27%
Laureate Education Inc	LAUR.O	27.0	411.5	1%
Fujian Sunner Development	002299.SZ	170.0	409.0	1%
Sunner Development	002299.sz	166.3	400.0	1%
Barti Infratel	BHRI.NS	93.0	346.3	0%
qingdoa haier	600690.SH	157.0	316.3	-16%
Focus Financial	FOCS.O	9.0	237.0	-44%
China International Capital Corp	3908.HK	112.0	210.2	2%
PT Japfa	JPFA.JK	1,300.0	194.5	6%
Max Financial Services	MAXI.NS	25.0	160.3	11%
GoDaddy	GDDY.N	2.3	150.9	-21%
Coffe Day	CODE.NS	20.0	80.2	2%
Rignet Inc	RNET.O	4.8	60.0	-38%
Eclipse Resources	ECR	10.0	10.5	-18%
China Outfitters	1146.HK	250.0	7.2	-3%
		Total:	8,745.9	-23.0%

Source: Thomson Reuters, Company Data; Note: Prices as of 12/31/2018

Exhibit 45: OAK Public Portfolio Holdings

OAK				
Name	Ticker	Shares (M)	Fair Value (\$M)	4Q18 Change
Vistra Energy	VST	35.7	817.6	-9%
Neo Performance	NEO.o	25.8	325.1	-16%
TORM PLC	TRMD.o	47.6	280.0	-10%
Star Bulk	SBLK.o	30.6	279.3	-40%
Tribune Media	TRCO.k	5.4	246.9	21%
Ally Financial	ALLY.k	8.7	197.4	-13%
Tawan Semiconductor Manufacturing	TSM	3.6	134.0	-17%
ICICI Bank	IBN	10.5	108.4	20%
Petrobras	PBR	8.1	105.9	8%
Itau Unibanco	ITUB.k	11.3	103.4	26%
NMI Holdings	NMIH.o	5.7	101.4	-21%
VICI Properties	VICI.k	3.6	67.2	-10%
Euronav NV	EURN.k	9.2	63.6	-24%
Anglogold	AU	3.9	49.1	47%
Infosys LTD ADR	INFY.k	4.7	44.4	-7%
Vale	Vale.k	3.3	43.5	-12%
CNOOC Ltd	CEO	0.3	41.9	-24%
Century Communities Inc	CCS	1.8	31.4	-34%
Sunopta	STKL.o	8.1	31.3	-47%
PG&E	PCG	1.2	29.0	-48%
CEMEX	CX	4.8	23.1	-32%
		Total:	3,123.9	-13.3%

Source: Bloomberg 13F data, Company Data; Note: Prices as of 12/31/2018

Recent Select Investments For The Alts

Exhibit 46: APO Recent Reported and Announced Investments

Select Recent Announced and Closed Investments				
APO				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
11/16/18	Lifepoint Health	5,579	APO Completed the acquisition of LPNT, which it plans to merge with its RCCH HealthCare Partners	Healthcare-Hospitals/Clinics

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 47: ARES Recent Reported and Announced Investments

ARES				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
12/21/18	Three Texas Wind Farms	n/a	Ares purchases three Texas windfarms from BP	Energy
Aggregate Trans. Size:		n/a		

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 48: BX Recent Reported and Announced Investments

BX				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
11/26/18	Ultrerra Drilling Technologies	700	BX acquires majority interest in drill bit manufacturer	Energy-Field Equipment
11/1/18	iCapital	n/a	BX invests in service platform for alternative investments	Software
10/4/18	Clarus	n/a	BX acquires Clarus to establish life sciences platform	Finance
11/30/18	Seattle Property	540	800 Fifth Avenue office building	Real Estate
12/10/18	Acrisure LLC (Stake%)	2,000	BX, Partners, and Harvest invest up to \$2b in preferred equity	Insurance-Brokers
10/15/18	NEC Group	1,051	BX acquires a leading live events venue operator in the UK	Real Estate
12/10/18	Logistics Properties	342		Real Estate
Aggregate Trans. Size:		4,633		

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 49: CG Recent Reported and Announced Investments

CG				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
10/15/18	Apollo Aviation Group	75	CG acquires global commercial aviation investment and servicing firm, which will become a new CG business line	Finance - Leasing
11/8/18	CommScope	1,000	CG reestablished ownership in CommScope through a \$1b minority equity investment to finance CommScope's acquisition of ARRIS	Telecommunications
11/8/18	iCapital	n/a	CG invests in service platform for alternative investments	Software
11/26/18	Emera	590	CG buys gas-fired generation facilities from Emera	Energy
11/22/18	B&B Italia SpA (50%); Louis Poulsen Lighting	1,624	Carlyle completes investment in high-end interior design group	Consumer Products
10/15/18	Adicon	440	CG and Meinian Onehealth become single largest shareholder of Adicon, a large clinical lab company in china	Healthcare
10/15/18	EnerMech Ltd	n/a	CG buys an international services company providing asset support to the energy, infrastructure and industrials sectors	Engineering
10/31/18	Codorniu	451	Cg buys 68% shares of Unideco, the parent company of Spanish Cava producer	Beverage
12/17/18	StandardAero	5,000	CG announces purchase of StandardAero, a airplane maintenance company, from Veritas Capital	Aerospace
12/19/2018	Odyssey Behavioral	200	Healthcare facilities	Healthcare
		Aggregate Trans. Size:	9,380	

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 50: KKR Recent Reported and Announced Investments

KKR				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
10/9/18	Property in Soul	1,900	KKR, IGIS, and NPS acquire real estate in South Korea	Real Estate
10/22/18	Magneti Auto	7,125	KKR 's Calsonic Kenisei to buy Fiat Chrysler's Magneti	Automotive
10/26/18	Epic Games	179	\$1.3b invested in Epic from seven firms	Software
10/31/18	Property Guru	144	KKR invests in Singapore property listings group	Software
11/19/18	Geostabilization	n/a	KKR to acquire Geostabilization from CAI Capital Partners	Construction
12/3/18	1330 Oakland Property	n/a	Joint purchase with TMG	Real Estate
12/4/18	V3 Group	366	KKR takes significant stake in asian conglomerate that owns TWG, a tea brand company	Beverage

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Exhibit 51: OAK Recent Reported and Announced Investments

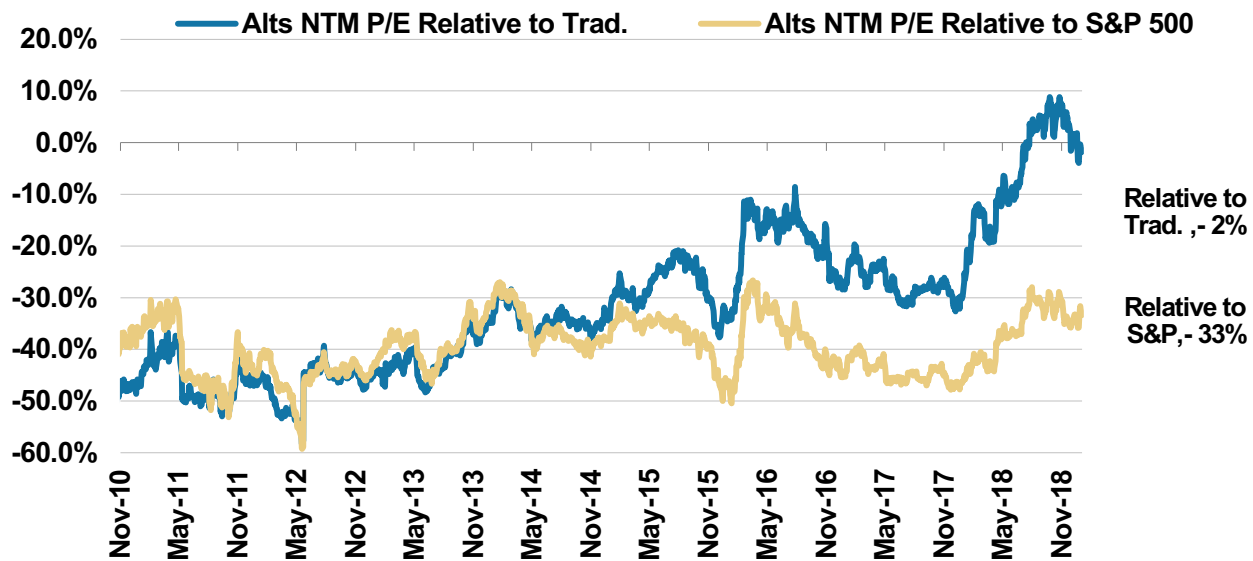
OAK				
Date	Target Name	Transaction Size (\$M)*	Description	Industry
11/7/18	MWH Constructors	103	OAK buys provider of customized, integrated construction, and project delivery services	Construction
10/25/18	Assembled Brands	100	OAK invests in emerging consumer brands financing company	Finance

Source: Transaction size represents enterprise value in some cases, so this should not be interpreted as investment equity value; Announced deals have been publicly confirmed by companies; Reported deals have been reported in the press, but to our knowledge the companies have not commented on them; Source: Wall Street Journal, Reuters, Bloomberg, Company Data, Morgan Stanley Research

Alts Key Charts: Valuation

Exhibit 52: Covered Alternative Asset managers NTM Relative P/E

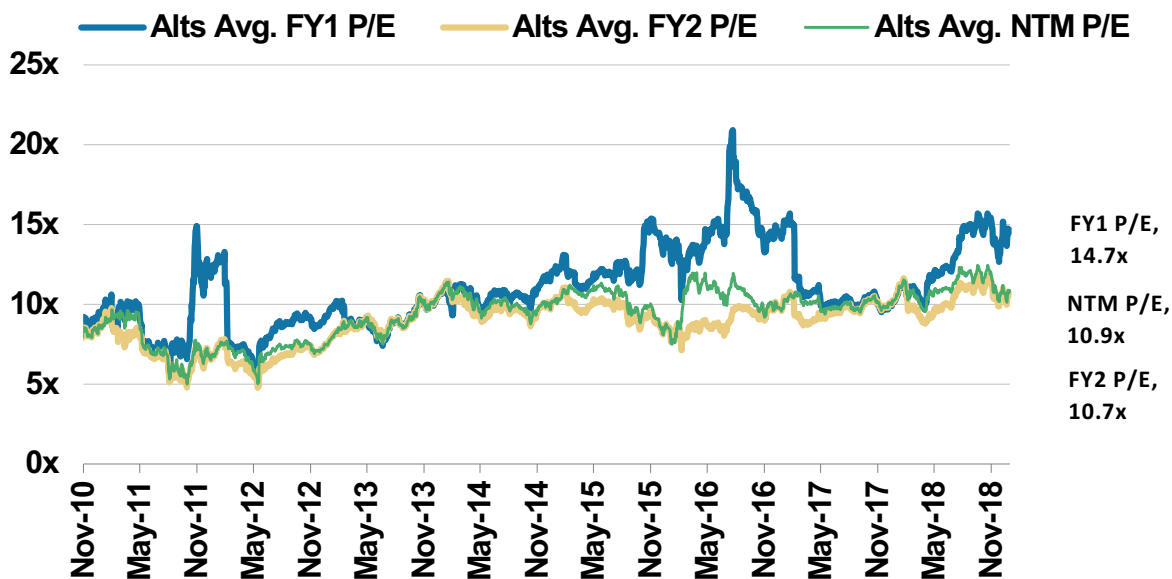
Alts NTM P/E Ratios Relative to Trad. AMs and S&P 500



Source: Company Data, Thomson Reuters, Morgan Stanley Research estimates

Exhibit 53: Covered Alternative Asset managers NTM Absolute P/E

Alts P/E Ratios



Source: Company Data, Thomson Reuters, Morgan Stanley Research estimates

Benchmark Indices to Estimate Marks on Private Holdings

Exhibit 54: Benchmark Summary

Performance as of: 12/31/2018	2017					2018				
	1Q	2Q	3Q	4Q	Full Year	1Q	2Q	3Q	4Q	Full Year
Broad Market Indices (Total Return)										
S&P 500 Index	6.1%	3.1%	4.5%	6.6%	21.8%	-0.8%	3.4%	7.7%	-13.5%	-4.4%
S&P 500 (Avg. Daily Change)	6.8%	3.7%	3.4%	6.1%	21.5%	5.4%	-0.6%	5.8%	-4.8%	5.6%
FTSE All World	7.0%	4.4%	5.3%	6.0%	24.6%	-0.9%	0.6%	4.4%	-12.6%	-9.1%
STOXX Europe 600	7.8%	7.9%	6.5%	2.2%	26.6%	-1.7%	-0.9%	0.8%	-12.9%	-14.5%
MSCI AC World	7.0%	4.5%	5.3%	5.8%	24.6%	-0.8%	0.7%	4.4%	-12.7%	-8.9%
MSCI AC World (Avg. Daily Change)	6.3%	5.3%	4.6%	5.4%	23.4%	5.0%	-1.2%	1.8%	-6.0%	-0.8%
MSCI EM	11.5%	6.4%	8.0%	7.5%	37.8%	1.5%	-7.9%	-0.9%	-7.4%	-14.2%
MSCI Europe	7.6%	7.7%	6.5%	2.3%	26.2%	-1.9%	-0.9%	0.8%	-12.7%	-14.3%
MSCI AC Asia	9.3%	7.0%	5.6%	8.4%	33.8%	0.8%	-4.3%	0.8%	-11.1%	-13.5%
MSCI World Ex-US	7.0%	5.9%	5.7%	4.3%	24.8%	-1.9%	-0.5%	1.4%	-12.7%	-13.6%
Broad Market Indices (Price Index)										
S&P 500 Index	5.5%	2.6%	4.0%	6.1%	19.4%	-1.22%	2.93%	7.20%	-13.97%	-6.2%
MSCI AC World	6.1%	4.6%	5.0%	3.9%	21.0%	-2.69%	-1.82%	0.72%	-13.12%	-16.4%
MSCI EM	11.1%	5.5%	7.0%	7.1%	34.3%	1.07%	-8.66%	-2.02%	-7.85%	-16.6%
MSCI Europe	6.7%	5.9%	6.0%	1.9%	22.1%	-2.57%	-2.74%	0.39%	-13.04%	-17.3%
MSCI AC Asia	8.7%	6.4%	4.6%	8.1%	30.8%	0.25%	-4.85%	-0.20%	-11.34%	-15.6%
Value vs Growth & Size										
Russell 2000 (Price Index)	2.1%	2.1%	5.3%	3.0%	13.1%	-0.4%	7.4%	3.3%	-20.5%	-12.2%
S&P 400 MidCap	3.9%	2.0%	3.2%	6.3%	16.2%	-0.8%	4.3%	3.9%	-17.3%	-11.1%
Russell 3000 (Price Index)	5.2%	2.5%	4.1%	5.8%	18.9%	-1.1%	3.4%	6.6%	-14.7%	-7.0%
Russell 3000 Growth	8.6%	4.7%	5.9%	7.6%	29.6%	1.5%	5.9%	8.9%	-16.3%	-2.1%
Russell 3000 Value	3.0%	1.3%	3.3%	5.1%	13.2%	-2.8%	1.7%	5.4%	-12.2%	-8.6%
S&P GICS Sectors (Total Return)										
S&P 500 Consumer Discretionary	8.4%	2.4%	0.8%	9.9%	23.0%	3.1%	8.2%	8.2%	-16.4%	0.8%
S&P 500 Consumer Staples	6.4%	1.6%	-1.3%	6.5%	13.5%	-7.1%	-1.5%	5.7%	-5.2%	-8.4%
S&P 500 Energy	-6.7%	-6.4%	6.8%	6.0%	-1.0%	-5.9%	13.5%	0.6%	-23.8%	-18.1%
S&P 500 Financials	2.5%	4.2%	5.2%	8.6%	22.2%	-1.0%	-3.2%	4.4%	-13.1%	-13.0%
S&P 500 Healthcare	8.4%	7.1%	3.7%	1.5%	22.1%	-1.2%	3.1%	14.5%	-8.7%	6.5%
S&P 500 Industrials	4.6%	4.7%	4.2%	6.1%	21.0%	-1.6%	-3.2%	10.0%	-17.3%	-13.3%
S&P 500 Info Tech	12.6%	4.1%	8.6%	9.0%	38.8%	3.5%	7.1%	8.8%	-17.3%	-0.3%
S&P 500 Materials	5.9%	3.2%	6.0%	6.9%	23.8%	-5.5%	2.6%	0.4%	-12.3%	-14.7%
S&P 500 Utilities	6.4%	2.2%	2.9%	0.2%	12.1%	-3.3%	3.7%	2.4%	1.4%	4.1%
Credit: Investment Grade, Muni, Sovereign, CMBS and Converts										
Barclays Global Agg	-0.5%	0.2%	-0.1%	-0.1%	-0.5%	-1.0%	-0.9%	-1.0%	0.7%	-2.3%
Global Agg (Avg. Daily Change)	-1.6%	0.6%	-0.1%	-0.3%	-1.4%	-1.2%	-0.8%	-0.4%	-1.0%	-3.3%
Barclays US Agg	0.0%	0.7%	0.1%	-0.4%	0.4%	-2.2%	-0.9%	-0.7%	0.9%	-2.9%
Barclays Municipal Bond	0.7%	1.3%	0.4%	0.1%	2.6%	-2.0%	0.1%	-1.0%	0.7%	-2.2%
Barclays US Treasury TIPS 1-5 Yr	0.0%	-1.2%	0.1%	-0.8%	-2.0%	-0.7%	-0.7%	-0.8%	-0.6%	-2.8%
Barclays US Mortgage Backed Securities	-0.3%	0.2%	0.3%	-0.5%	-0.4%	-2.0%	-0.5%	-0.8%	1.3%	-2.1%
ML US Convertible Bonds	5.3%	2.4%	4.2%	1.5%	14.0%	2.7%	3.5%	3.3%	-10.2%	-1.4%
IG - OAS (bp)						17 bps	13 bps	-17 bps	47 bps	60 bps
BBB -OAS (bp)						15 bps	17 bps	-20 bps	61 bps	72 bps
Credit: High Yield, Leveraged Loans and Distressed										
HY Spread - BBB vs 10yr Treasury (bps)	126	130	121	119		137	149	134	n/a	
HY Market -STW						19 bps	-12 bps	-42 bps	201 bps	166 bps
BB						37 bps	5 bps	-41 bps	142 bps	142 bps
B						21 bps	-4 bps	-56 bps	233 bps	195 bps
CCC						-77 bps	-96 bps	-11 bps	411 bps	227 bps
BofA ML US High Yield Master II Const	2.7%	2.1%	2.0%	0.4%	7.5%	-0.9%	1.0%	2.4%	-4.6%	-2.3%
Barclays US High Yield	1.1%	0.6%	0.3%	-0.9%	1.1%	-2.2%	-0.7%	0.8%	-6.3%	-8.3%
BofA ML Euro High Yield Constrained	3.1%	9.1%	5.5%	2.3%	21.5%	1.9%	-6.2%	1.1%	-5.1%	-8.2%
Barclays Global High Yield	1.4%	0.6%	0.6%	-0.2%	2.4%	-2.5%	-2.8%	0.5%	-4.9%	-9.4%
BofA ML US High Yield (CCC) & Lower	5.2%	1.7%	2.6%	0.8%	10.6%	0.3%	3.6%	2.8%	-10.3%	-4.1%
BofA ML Euro High Yield (CCC) & Lower	0.6%	2.7%	3.1%	0.0%	6.6%	-2.6%	-3.3%	-3.4%	-10.0%	-18.2%
S&P Leveraged Loan Index	1.2%	0.8%	1.0%	1.1%	4.1%	1.4%	0.7%	1.8%	-3.4%	0.5%
HFRX Special Situations Index	3.5%	1.8%	2.6%	-0.4%	7.8%	-4.7%	0.8%	-1.9%	-8.9%	-14.2%
HFRX Distressed Restructuring Index	1.6%	1.0%	-0.1%	0.7%	3.1%	-5.4%	-0.8%	0.6%	-4.3%	-9.7%
BofA ML HY Distressed	6.4%	-2.7%	-1.6%	-5.6%	-3.8%	0.1%	6.7%	-1.0%	-22.3%	-17.8%

Note: Spreads data as of 12/31/18; FX data through 12/31/18; Other data as of 12/31/18; Source: Thomson Reuters, Bloomberg

Exhibit 55: Benchmark Summary Cont.

Performance as of: 12/31/2018	2017					2018				
	1Q	2Q	3Q	4Q	Full Year	1Q	2Q	3Q	4Q	Full Year
Real Estate										
S&P 500 US REIT's	0.6%	1.5%	0.8%	1.4%	4.3%	-8.2%	10.4%	1.1%	-6.1%	-3.8%
MSCI All World Real Estate	4.9%	4.4%	3.6%	4.4%	18.5%	-3.5%	1.6%	-1.4%	-3.8%	-7.0%
MSCI All World Diversified REIT	0.1%	0.3%	0.8%	3.9%	5.2%	-8.7%	3.9%	-0.2%	-5.1%	-10.2%
Hedge Funds										
HFRX Global HF Index	1.7%	0.9%	1.8%	1.5%	6.0%	-1.0%	0.2%	-0.4%	-5.8%	-7.0%
HFRX Event Driven Index	3.0%	1.6%	1.9%	-0.1%	6.5%	-4.8%	0.3%	-1.1%	-7.4%	-12.5%
Commodities										
WTI Light Crude Oil	-5.8%	-9.0%	12.2%	16.9%	12.5%	7.5%	14.2%	-1.2%	-38.0%	-24.8%
Brent Crude Oil	-7.0%	-9.3%	20.1%	16.2%	17.7%	5.1%	13.0%	4.1%	-36.8%	-21.8%
Natural Gas	-14.3%	-4.9%	-0.9%	-1.8%	-20.7%	-7.5%	7.0%	2.9%	-2.3%	-0.4%
CMX Gold 100 Oz.	8.5%	-0.5%	3.3%	1.9%	13.6%	1.3%	-5.4%	-4.8%	7.3%	-2.1%
Baltic Exchange Dry Index	35.0%	-30.5%	50.5%	0.7%	42.1%	-22.8%	31.3%	11.2%	-17.5%	-7.0%
S&P Global Natural Resources Index	2.9%	-0.9%	10.8%	8.6%	22.7%	-1.6%	5.4%	1.3%	-16.8%	-12.6%
Rates										
10 Year	2.40%	2.31%	2.33%	2.40%	n/a	34 bps	11 bps	20 bps	-36 bps	29 bps
2 Year	1.27%	1.38%	1.47%	1.89%	n/a	38 bps	25 bps	29 bps	-33 bps	59 bps
Foreign Exchange										
US Trade Weighted Dollar Index	-1.0%	-2.9%	-5.0%	1.9%	-1.0%	-2.8%	4.0%	0.3%	2.2%	3.7%
US Dollar Index (DXY)	-1.8%	-4.7%	-2.7%	-1.0%	-9.9%	-2.1%	5.0%	0.5%	1.1%	4.4%
Europe - EUR/USD	2.5%	7.2%	3.4%	1.6%	15.5%	2.9%	-6.1%	1.3%	-2.7%	0.0%
UK - GBP/USD	2.6%	3.8%	2.8%	0.9%	10.5%	4.4%	-6.8%	0.3%	-3.4%	-2.2%
Switzerland - CHF/USD	1.9%	4.1%	-1.0%	-1.2%	3.8%	2.7%	-4.2%	2.8%	-1.8%	-2.9%
Japan - USD/JPY	-4.8%	1.2%	0.2%	0.3%	-3.2%	-5.9%	4.0%	2.3%	-2.9%	-2.4%
Brazil - USD/BRL	-4.2%	6.3%	-4.5%	4.5%	1.5%	1.0%	15.1%	5.7%	-4.5%	17.0%
India - USD/INR	-4.4%	-0.4%	1.1%	-1.9%	-5.5%	1.7%	5.2%	5.8%	-3.8%	8.0%
Russia - USD/RUB	-7.6%	4.1%	-2.3%	0.0%	-6.1%	0.3%	9.5%	4.2%	5.8%	18.3%
China - USD/CNY	-0.9%	-1.6%	-2.0%	-1.6%	-6.0%	-3.8%	4.9%	4.2%	-0.1%	1.3%

Note: Spreads data as of 12/31/18; FX data through 12/13/18; Other data as of 12/31/18; Source: Thomson Reuters, Bloomberg

Interest Rates Dashboard for Online Brokers

Exhibit 56: Rates Dashboard

EoP Interest Rates													
	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	4Q18 vs 3Q18	3Q18 vs 2Q18	2016	2017	2018	'17 vs '16	'18 vs '17
Treasury													
1 Month	0.96%	1.28%	1.63%	1.77%	2.12%	2.44%	32 bp	35 bp	0.44%	1.28%	2.44%	84 bp	116 bp
3 Month	1.06%	1.39%	1.73%	1.93%	2.19%	2.45%	26 bp	26 bp	0.51%	1.39%	2.45%	88 bp	106 bp
1 Yr	1.31%	1.76%	2.09%	2.33%	2.59%	2.63%	4 bp	26 bp	0.85%	1.76%	2.63%	91 bp	87 bp
2 Yr	1.47%	1.89%	2.27%	2.52%	2.81%	2.48%	(33)bp	29 bp	1.20%	1.89%	2.48%	69 bp	59 bp
5 Yr	1.92%	2.20%	2.56%	2.73%	2.94%	2.51%	(43)bp	21 bp	1.93%	2.20%	2.51%	27 bp	31 bp
10 Yr	2.33%	2.40%	2.74%	2.85%	3.05%	2.69%	(36)bp	20 bp	2.45%	2.40%	2.69%	(5)bp	29 bp
Treasury Spreads													
2 Yr vs 3M	0.41%	0.50%	0.54%	0.59%	0.62%	0.03%	(59)bp	3 bp	0.69%	0.50%	0.03%	(19)bp	(47)bp
10 Yr vs 3M	1.27%	1.01%	1.01%	0.92%	0.86%	0.24%	(62)bp	(6)bp	1.94%	1.01%	0.24%	(93)bp	(77)bp
10 Yr vs 2 Yr	0.86%	0.51%	0.47%	0.33%	0.24%	0.21%	(3)bp	(9)bp	1.25%	0.51%	0.21%	(74)bp	(30)bp
LIBOR													
1 Month	1.23%	1.56%	1.88%	2.09%	2.26%	2.50%	24 bp	17 bp	0.77%	1.56%	2.50%	79 bp	94 bp
3 Month	1.33%	1.69%	2.31%	2.34%	2.40%	2.81%	41 bp	6 bp	1.00%	1.69%	2.81%	70 bp	111 bp
1 Yr	1.56%	1.90%	2.42%	2.61%	2.78%	2.77%	(1)bp	18 bp	1.19%	1.90%	2.77%	71 bp	87 bp
3 Yr	1.84%	2.17%	2.66%	2.86%	3.04%	2.62%	(42)bp	18 bp	1.68%	2.17%	2.62%	49 bp	45 bp
5 Yr	1.99%	2.26%	2.71%	2.89%	3.06%	2.64%	(43)bp	18 bp	1.98%	2.26%	2.64%	28 bp	38 bp
Fed Funds													
Discount Rate	1.16%	1.42%	1.68%	1.92%	1.92%	2.40%	48 bp	0 bp	0.66%	1.42%	2.40%	76 bp	98 bp
Prime Rate	1.75%	1.90%	2.08%	2.39%	2.53%	2.85%	32 bp	14 bp	1.14%	1.90%	2.85%	76 bp	95 bp
	4.25%	4.40%	4.58%	4.89%	5.03%	5.35%	32 bp	14 bp	3.64%	4.40%	5.35%	76 bp	95 bp
Avg Interest Rates													
	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	4Q18 vs 3Q18	3Q18 vs 2Q18	2016	2017	2018	'17 vs '16	'18 vs '17
Treasury													
1 Month	0.98%	1.10%	1.44%	1.72%	1.95%	2.26%	30 bp	23 bp	0.24%	0.83%	1.84%	59 bp	102 bp
3 Month	1.05%	1.23%	1.58%	1.88%	2.07%	2.36%	28 bp	20 bp	0.31%	0.93%	1.96%	62 bp	103 bp
1 Yr	1.24%	1.55%	1.94%	2.25%	2.46%	2.67%	21 bp	21 bp	0.62%	1.20%	2.32%	59 bp	111 bp
2 Yr	1.36%	1.70%	2.16%	2.48%	2.66%	2.80%	14 bp	19 bp	0.84%	1.40%	2.48%	56 bp	108 bp
5 Yr	1.81%	2.07%	2.53%	2.77%	2.81%	2.88%	8 bp	4 bp	1.35%	1.92%	2.69%	56 bp	78 bp
10 Yr	2.24%	2.37%	2.75%	2.92%	2.92%	3.04%	12 bp	0 bp	1.86%	2.34%	2.85%	48 bp	51 bp
Treasury Spreads													
2 Yr vs 3M	0.31%	0.47%	0.58%	0.60%	0.59%	0.44%	(15)bp	(1)bp	0.53%	0.47%	0.52%	(6)bp	5 bp
10 Yr vs 3M	1.19%	1.15%	1.17%	1.05%	0.85%	0.68%	(17)bp	(20)bp	1.55%	1.41%	0.89%	(14)bp	(52)bp
10 Yr vs 2 Yr	0.88%	0.68%	0.60%	0.44%	0.26%	0.24%	(2)bp	(19)bp	1.02%	0.94%	0.37%	(8)bp	(56)bp
LIBOR													
1 Month	1.23%	1.34%	1.66%	1.97%	2.11%	2.35%	24 bp	14 bp	0.51%	1.11%	2.02%	61 bp	91 bp
3 Month	1.32%	1.47%	1.93%	2.34%	2.34%	2.63%	29 bp	(0)bp	0.75%	1.27%	2.31%	52 bp	104 bp
1 Yr	1.47%	1.73%	2.02%	2.19%	2.63%	2.70%	6 bp	44 bp	0.88%	1.47%	2.36%	59 bp	89 bp
3 Yr	1.71%	2.01%	2.52%	2.78%	2.92%	2.92%	0 bp	13 bp	1.14%	1.79%	2.56%	65 bp	76 bp
5 Yr	1.88%	2.13%	2.63%	2.89%	2.94%	2.89%	(5)bp	5 bp	1.35%	1.99%	2.82%	64 bp	83 bp
Fed Funds													
Window Rate	1.16%	1.19%	1.43%	1.72%	1.91%	2.20%	28 bp	19 bp	0.41%	1.01%	1.83%	60 bp	82 bp
Prime Rate	1.72%	1.79%	2.00%	2.24%	2.48%	2.72%	24 bp	24 bp	1.00%	1.56%	2.37%	56 bp	80 bp
	4.22%	4.29%	4.50%	4.74%	4.98%	5.22%	24 bp	24 bp	3.50%	4.06%	4.87%	56 bp	80 bp

Source: Bloomberg, Morgan Stanley Research;

Exhibit 57: Interest Rate Forward Curve (Average Rate)

Rates for Model Inputs: Base Case								
		2018_4Q	2019_1Q	2019_2Q	2019_3Q	2019_4Q	2019	2020
		12/30/18	3/30/19	6/30/19	9/30/19	12/30/19	12/30/19	12/30/20
FRFEDFW	Fed Funds	2.20%	2.33%	2.44%	2.44%	2.49%	2.42%	2.26%
BBUSD1M	1M LIBOR	2.35%	2.57%	2.48%	2.56%	2.55%	2.54%	2.39%
BBUSD3M	3M LIBOR	2.63%	2.77%	2.68%	2.67%	2.65%	2.69%	2.48%
ISUSD1Y	1 Year LIBOR	2.70%	2.72%	2.68%	2.63%	2.57%	2.65%	2.46%
ISUSD3Y	3 Year LIBOR	2.92%	2.57%	2.54%	2.52%	2.50%	2.53%	2.48%
ISUSD5Y	5 Year LIBOR	2.89%	2.55%	2.55%	2.54%	2.54%	2.54%	2.55%
USPRIME.	Prime Rate	5.59%	5.59%	5.50%	5.49%	5.47%	5.51%	5.29%
FRTCM1M	1 Month Treasury Bill	2.26%	2.46%	2.54%	2.65%	2.69%	2.69%	2.46%
FRTCM3M	3 Month Treasury Bill	2.36%	2.52%	2.59%	2.69%	2.66%	2.66%	2.44%
FRTCM6M	6 month Treasury Bill	2.50%	2.60%	2.67%	2.69%	2.54%	2.54%	2.43%
FRTCM2Y	2 Year Treasury Note	2.80%	2.51%	2.50%	2.48%	2.44%	2.44%	2.53%
FRTCM5Y	5 Year Treasury Note	2.88%	2.53%	2.54%	2.55%	2.55%	2.55%	2.65%
FRTCM10	10 Year Treasury Note	3.04%	2.71%	2.72%	2.73%	2.74%	2.74%	2.86%

Source: Bloomberg, Morgan Stanley Research;

Source: Company Data, Thomson Reuters, Morgan Stanley Research estimates, except for non-covered companies (NC), which are consensus. For valuation methodology and risks associated with any price targets, ratings or recommendations referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-5424-4349. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Valuation and Risks

US Traditional Asset Managers

Our valuation reflects a ~40% discount vs. S&P500 to reflect client outflows, fee compression and expense pressures. This compares to the industry's historical premium of about 10%.

BLK.N

BlackRock: We value BLK at 17.0x 2020 EPS, reflecting accelerating organic growth and operating margin expansion that should warrant a multiple toward the higher end vs historical, offset by a challenging macro backdrop that may weigh on flows. Upside risk includes flows to higher fee products and iShares penetration into fixed income and international markets greater than expected. Downside risks include decline in organic revenue growth and designation as a Non-Bank, Non-Insurance Systemically Important Financial Institution.

BEN.N

Franklin Resources: We value BEN using a 4.7x EV/EBITDA multiple on CY2020e EBITDAs, a discount to the historical of 8.3x due to a subdued growth profile and a premium to the group reflecting large cash position despite historical group discount. Upside risks are accelerated capital return or accretive acquisition and flows stabilize. Downside risks are that flows and performance deteriorate more rapidly than anticipated and secular fee pressure takes hold.

HLNE.O

Hamilton Lane: We value HLNE at 21.0x multiple on 2020 EPS, a premium to traditional peers and a 35% premium to our equity strategists target S&P multiple, given faster organic asset growth, stickier AUM and minimal mark to market volatility. This is a premium to traditional peers given faster organic asset growth, stickier AUM and minimal mark to market volatility. Downside risks include slower AUM growth driven by poor investment performance, loss of key relationships, extended pull-back in financial markets that could mark down accrued incentives or delay harvesting of investments.

IVZ.N

Invesco: We value IVZ using a 6.6x EV/EBITDA multiple on 2020e EBITDA, a discount to the group given deteriorating organic growth. Upside risks are that inflows accelerate faster than we expect and penetration of the institutional market occurs faster. Downside risk is that the US retail market proves more challenging and enough to offset institutional progress, rising cost pressure, traction slows with fixed income and alts products and the UK vote to exit from the EU has a greater impact than estimated.

LM.N

Legg Mason: We value LM at 7.2x EV/EBITDA on CY2020 EBITDA, reflecting business model challenges and lack of consistent organic growth. Upside risks are that EntrustPermal relative outflows stabilize and Western Asset Management inflows accelerate. Downside risks are that LM fails to capitalize on institutional fixed income flows and performance deteriorates and performance challenges lead to accelerated

outflows.

BSIG.N

BrightSphere Investment Group: We value BSIG at 5.7x EV/EBITDA on 2020 EBITDA, a discount to historical valuation of 7.2x EV/EBITDA, reflecting deteriorating flow outlook. Upside risks are a turnaround in US equity flows and an accretive acquisition made. Downside risks are that acquisitions prove more challenging and US equity outflows accelerate.

TROW.O

T. Rowe Price: Our 15.0x multiple on 2020 EPS, slightly below their 5-yr historical multiple of 15.4x reflects a more uncertain outlook for future organic asset growth and longer-term secular challenges, outlook for margin compression and uncertainty on degree of lower tax rate falling to the bottom line. This reflects their stickier AUM with skew to retirement money that's partially offset by weaker organic growth and expense uplift. Upside risks are that the build out of their international business, expansion of distribution and new product offerings prove more successful. Downside risks include more rapid encroachment from passive products, particularly in the retirement channel, and faster/more severe repricing of active management products.

WDR.N

Waddell & Reed: We value WDR at 5.5x EV/EBITDA on 2020 EBITDA, a 28% discount to historical EV/EBITDA multiple of 7.6x to reflect business model challenges, continued outflows and outlook of fee compression. Upside risks are that improving performance in equity franchise lead to flows and fixed income inflows accelerate. Downside risks are that the elevated consensus figures prove tough to meet.

WETF.O

WisdomTree: We value WETF at 20x EPS, a discount to historical 28x P/E multiple, given increased competitive pressures in the ETF business that we expect drive pricing compression and dampen the M&A take-out premium, we also see uncertainty on the degree of a lower tax rate falling to the bottom line. Upside risks include: WETF's products gain significant traction in growing ETF market; rising rates strengthen the US dollar leading investors to invest more in currency hedged products; strategic actions. Downside risks include: HEDJ or DXJ attrition without new funds providing offset; US equity ETF momentum slows; fee pressure; breakeven profitability of international operations take longer than 2019; volatile or declining equity market performance.

VCTR.O

Victory Capital Holdings: We value VCTR at 3.4x EV/EBITDA on 2020e adjusted EBITDA, and 5.8x pro forma for post acquisition capital structure. This reflects a discount to peers reflecting outflows. Upside risks include improving flow trajectory and merger synergies. Downside risks are deterioration in investment performance and weaker flows.

VRTS.O

Virtus Investment Partners: We value VRTS at 5.3x EV/EBITDA on 2020 EBITDA, a 21% discount to historical multiple of 6.7x, reflecting sharply deteriorating mutual fund flows that should keep the multiple below historical. Upside risks include faster than expected inflows across fixed income products and ETFs. Downside risks are that concentration and idiosyncratic risks drive outsized outflows.

Alternative Asset Managers: We value the stocks using a sum of the parts valuation and

discounted cash flow as well as price/earnings and price/cash earnings multiples. Our DCF (COE of 12–15%, free cash flow = distributable earnings and terminal growth rate = 4%) captures the long-term value of the business model, while the sum of the parts captures some of the shorter-term volatility. For our SOTP, we use 2020 “Core” FRE and apply a 14x-18x multiple; apply 13x multiple on BDC income share; use NPV to estimate future carry and apply discount rate to represent volatile nature of carry; 15% haircut on accrued carry; 15% haircut on B/S assets.

APO.N

Apollo Global Management: We value APO using a sum-of-the-parts, supported by a DCF, and back into an implied target multiple on DE, and ENI. Our price target implies a 8.7x multiple on 2020 EPS, reflecting a 7% discount to 3 year average valuation of 9.4x due to on weaker portfolio marks and slowing portfolio monetization activity that weigh on valuation. Upside risks: Better FPAuM growth, capital deployment and monetizations accelerate, better returns. Downside risks: Declining valuations reduce cash earnings (fewer exits or lower multiples); slower deployment; Funds V, VI and VII and ANRP remain in escrow, pressuring near term cash earnings.

ARES.N

Ares: We value ARES using a sum-of-the-parts, supported by a DCF, and back into an implied target multiple on Realized EPS, and ENI. Our PT represents a 12.9x multiple on realized EPS; while not comparable to historical multiple of 9.9x on mark to market EPS, our comparable mark to market EPS of \$1.68 implies a 10.3x multiple which is a 4% premium reflecting expectations for accelerating mgmt fee growth and benefits from recent C-Corp conversion that could expand the investor base and support the multiple. Upside risk includes better asset gathering, stronger investment performance and faster monetization of portfolio investments. Downside risk that strong AUM baked into our model over the next several years will not materialize. ARCC concentration risk (a BDC which contributes 36% of mgmt fees / 31% of revenue), and harvesting delays if there's an extended financial & capital markets pullback.

BX.N

Blackstone: We value BX using a sum-of-the-parts, supported by a DCF, and back into an implied target multiple on DE and ENI. Our PT represents a 10.6x PE multiple, above the 3 year average of 9.8x on expectations for accelerated growth in fee-related earnings, cash earnings growth and fundraising. Upside risks: Stronger investment performance, faster monetization of portfolio companies, better asset growth through new initiatives. Downside risks: Weakness in public markets and commercial real estate markets pressure investment performance. Harvesting delays—An extended pull-back in financial and capital markets that delays harvesting of investments and dampens returns which lower cash earnings.

CG.O

Carlyle: We value CG using a blended sum-of-the-parts, supported by a DCF, and back into an implied target multiple on DE and ENI. Our PT implies a 6.6x multiple on 2020 EPS, reflecting a 18% discount to historical valuation of 8.1x given a more volatile market backdrop that raises downside risk with CG that's most skewed to performance fee earnings and lowers the likelihood of the bull case over the next 12 months. Upside risks include: Better investment performance, strong asset gathering and faster monetization of portfolio companies. Downside risks include an extended pull-back in financial and capital mkts that delays harvesting of investments and dampens returns which lower

cash earnings, and poor investment performance.

KKR.N

KKR: We value KKR using a 1.2x multiple on 2019 estimated book value and back into an implied target multiple on Realized EPS and ENI. Our price target is also supported by a sum-of-the-parts valuation. Our PT implies a 11.5x multiple on 2020 Realized EPS; while not comparable to historical multiple of 8.2x on mark to market EPS, our comparable mark to market eps of \$2.99 implies a 7.4x multiple which is a 10% discount on growing balance sheet markdown concerns and slowing monetization trajectory. Upside risks include better investment performance, compounding book value growth and faster asset gathering from newer initiatives. Downside risks include an extended pull-back in financial and capital markets that delays harvesting of investments and dampens returns which lower cash earnings and impairs significant investments held on balance.

OAK.N

Oaktree: We value OAK using a sum-of-the-parts, supported by a DCF, and back into an implied target multiple on next 3 years DE and ENI. Our PT implies a 14.4x multiple on 2020 EPS, reflecting a 16% premium to historical valuation of 12.5x given expectations for their Opps Xb fund to turn fees on during 2019 and sharply boost fee related earnings. Upside risks include better investment performance, faster monetization of portfolio investments, strong asset gathering from newer initiatives and inflection higher in fee related earnings. Risks include poor investment performance, an extended pull-back in financial and capital markets that delays harvesting of investments and dampens returns which lower cash earnings.

Brokers

SCHW.N

Charles Schwab: Our 19.0x multiple on 2020 EPS, is a slight discount to their historical multiple reflecting upside to the bulk deposit transfer opportunity and strength in asset gathering firm wide, partially offset by less rate upside at this point in the rate cycle. Risks include sustained low interest rate environment, substantial slowdown in organic client asset growth and unforeseen regulatory/legal risks.

ETFC.O

E*TRADE Financial: Our 13.5x multiple on 2020 EPS, a discount to the historical multiple reflecting a significant improvement in their business profile and accelerating client activity rates, offset by less rate hike upside and late cycle concerns. Risks include sustained low interest rate environment, client activity and engagement does not accelerate, competition and regulation pressure transaction revenue economics, inability to successfully pivot toward retirement and long-term investors and credit deterioration in the mortgage portfolio.

LPLA.O

LPL Financial: Our 12.0x multiple on 2020 EPS, a discount with their historical multiple reflecting an improved regulatory outlook and better interest rate sensitivity, offset by late cycle concerns and slower organic growth vs peers. Risks include slower advisor headcount and organic asset growth, pricing pressure and regulation pressure revenues.

AMTD.O

TD Ameritrade: Our 14.0x multiple on 2020 EPS, is a discount to their historical multiple reflecting a successful Scottrade integration and accelerating client activity rates, offset by less rate upside and commission pricing concerns. Risks include market weakness

drives downside to volumes and volatility, rate hikes pushed out, substantial slowdown in organic asset growth and unanticipated regulatory/legal challenges including payment for order flow.

Market Structure

VIRT.O

Virtu Financial: We arrive at our price target of \$27 through a comparable multiples approach, using an 12.5x target P/E on FY2020E adjusted EPS and 8.0x EBITDA. This reflects a ~2-turn discount to historical P/E of 15.0x and ~2-turn discount to historical EV/EBITDA of 10.0x (pre-KCG), capturing the volatile earnings profile and limited forward earnings power visibility. Upside risks are sustained volatility levels in line with 1Q18, a sustained spike in trading volume and faster than expected realization of incremental revenue synergies from KCG deal. Downside risks are realized volatility levels reverting back to levels we saw in 2017, slower than expected organic growth, both geographically and asset class wise, and a potential technology glitch.

Morgan Stanley & Co. International plc ("Morgan Stanley") is acting as a financial advisor to Riverstone Holdings LLC ("Riverstone") and The Carlyle Group ("Carlyle") in relation to their proposed sale of HES International B.V. to Macquarie Infrastructure and Real Assets and West Street Infrastructure Partners III (managed by the Merchant Banking Division of Goldman Sachs). The proposed transaction is subject to legal and antitrust approvals. Riverstone and Carlyle have agreed to pay fees to Morgan Stanley for its financial services. Please refer to the notes at the end of the report.

Morgan Stanley is acting as financial advisor to Bank of Cyprus Holding Plc ("Bank of Cyprus ") in relation sale of a portfolio of non-performing loans to Apollo Global Management LLC as announced on 28th August 2018. Bank of Cyprus has agreed to pay fees to Morgan Stanley for its financial services. Please refer to the notes at the end of the report.

Morgan Stanley is acting as financial advisor to Franklin Resources, Inc. ("Franklin Resources") in connection with its definitive agreement to acquire Benefit Street Partners L.L.C., as announced on October 25, 2018. Franklin Resources has agreed to pay fees to Morgan Stanley for its financial services which are contingent upon the consummation of the transaction. The closing of the transaction is subject to customary closing conditions. Please refer to the notes at the end of the report.

Morgan Stanley is acting as financial advisor to StandardAero Aviation Holdings, Inc. ("StandardAero") in connection with its definitive agreement to be acquired by The Carlyle Group, as announced on December 18, 2018. The proposed transaction is subject to customary regulatory conditions. StandardAero has agreed to pay fees to Morgan Stanley for its financial services, including transaction fees which are contingent upon consummation of the transaction. Please refer to the notes at the end of this report.

Morgan Stanley Australia Limited ("Morgan Stanley") is acting as financial advisor and providing financing services to GenesisCare Finance Pty Ltd ("GenesisCare") in relation to the proposed capital raising which includes a refinancing of debt facilities while securing a second major equity investing partner KKR as announced on 25th October 2018. The transaction is subject to regulatory and other customary closing conditions. GenesisCare

has agreed to pay fees to Morgan Stanley for its financial services, including transaction fees and financing fees that are subject to the consummation of the transaction. Please refer to the notes at the end of the report.

Morgan Stanley & Co. International plc ("Morgan Stanley") is acting as financial advisor to funds advised by BC Partners ("BC Partners") in relation to their definitive agreement whereby BC Partners will acquire majority ownership of United Group B.V. from KKR, as announced on 27 September 2018. The proposed transaction is subject to relevant regulatory approvals and other customary closing conditions. BC Partners has agreed to pay fees to Morgan Stanley for its financial services, including transaction fees and financing fees that are contingent upon the consummation of the proposed transaction. Please refer to the notes at the end of this report.

Morgan Stanley is acting as financial advisor to The Carlyle Group ("Carlyle") in relation to their agreement to have affiliates of funds managed by Carlyle become the majority owner of Sedgwick, as announced on September 12, 2018. KKR, the current majority shareholder in Sedgwick, will fully exit its position following the transaction. The proposed transaction is subject to customary closing conditions, including regulatory approvals. Carlyle has agreed to pay fees to Morgan Stanley for its financial services that are contingent upon the consummation of the proposed transaction. Please refer to the notes at the end of this report.

Disclosure Section

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(as of December 31, 2018)

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STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MSC
Overweight/Buy	1143	36%	282	40%	25%	540	38%
Equal-weight/Hold	1428	45%	336	47%	24%	651	46%
Not-Rated/Hold	46	1%	6	1%	13%	6	0%
Underweight/Sell	566	18%	86	12%	15%	232	16%
TOTAL	3,183		710			1429	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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COMPANY (TICKER)	RATING (AS OF)	PRICE* (01/03/2019)
Michael J. Cyprys, CFA, CPA		
Apollo Global Management LLC (APO.N)	E (11/14/2018)	\$23.88
Ares Management, L.P. (ARES.N)	E (12/15/2014)	\$17.10
BlackRock Inc. (BLK.N)	O (09/18/2015)	\$377.98
BrightSphere Investment Group PLC (BSIG.N)	E (01/26/2016)	\$11.14
Charles Schwab Corp (SCHW.N)	O (09/26/2016)	\$40.72
E*Trade Financial Corp (ETFC.O)	O (01/03/2018)	\$43.40
Franklin Resources Inc. (BEN.N)	U (03/16/2017)	\$29.30
Hamilton Lane Incorporated (HLNE.O)	E (10/05/2017)	\$35.98
Invesco (IVZ.N)	E (01/03/2018)	\$16.43
KKR & CO. L.P. (KKR.N)	E (02/17/2016)	\$18.71
Legg Mason Inc. (LMN)	U (10/05/2017)	\$25.91
LPL Financial Holdings Inc. (LPLAO)	E (01/03/2018)	\$59.74
Oaktree Capital Group, LLC (OAK.N)	O (12/15/2014)	\$40.93
T. Rowe Price Group, Inc. (TROW.O)	E (10/05/2017)	\$88.81
TD Ameritrade Holding Corp. (AMTD.O)	O (11/14/2018)	\$48.22
The Blackstone Group L.P. (BXN)	O (12/15/2014)	\$29.23
The Carlyle Group L.P. (CGO)	E (11/14/2018)	\$15.56
Victory Capital Holdings Inc (VCTR.O)	O (03/05/2018)	\$10.49
Virtu Financial Inc (VRT.O)	E (08/08/2018)	\$26.71
Virtus Investment Partners (VRTS.O)	E (06/01/2017)	\$80.48
Waddell & Reed Financial Inc (WDR.N)	U (09/18/2015)	\$17.79
WisdomTree Investments, Inc. (WETF.O)	E (09/18/2015)	\$6.37

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