	1 Asset Class Valuation Model	As of 9/30/2015				9/30/2015			
Lege	e Cap US Equities	9/30/2013		ALC: N					
LCBC	Negative								
	Neutral								
	Positive							Signs	
			T			E Va Signal Sagar / 2 a		315113	
			1			5-Yr Signal Score (-2 -> - 0.5 = negative, -0.5 -> 0.5		Between -1σ	
Large	Cap US Equities	Signal				= neutral, 0.5 -> 2 = positive)	More than 1σ Above Average	and +1 σ From Average	
			1			positive	Above Average	Average	Below Average
OVER	ALL LARGE CAP US EQUITY SIGNAL	-1.62				-1.62			
						F Va Bassi Carana / 2 a. 4		ÿ	
		12				5-Yr Raw Score (-2 -> -1 = negative, -1 -> 1 = neutral,			
Weigh		Z-Score ¹		1 40		1 -> 2 = positive)	i		
25%	Macro Signal		Current	10-yr average	5-yr average		á		
2370	Leading Economic Index (12-mo % Change)	-0.1	Value ²	value 111.0	value 111.4	-1.0 0.0	Positive	Neutral	Nogativo
	2's 10's spread (level, 12-mo avg)	-1.3	1.4%	1.6%	1.9%	-2.0	Positive	Neutral	Negative Negative
	Corporate profitability, S&P 500 Index Net Margin (12-mo Change)	-1,4	10.6%	9.6%	10.1%	-2.0	Positive	Neutral	Negative
	GDP Growth (12-mo Change)	-0.3	3.9%	1.5%	2.1%	0.0	Positive	Neutral	Negative
			Current	10-yr	5-yr				
50%	Valuation Signal	3.00	Value ²	average value	average value	-2.0			
	12m forward P/E, S&P 500 Index (level, 12-mo avg)	1.9	15.1	14.1	14.1	-2.0	Negative	Neutral	Positive
	12m forward P/B, S&P 500 Index (level, 12-mo avg)	1.8	2.4	2.3	2.2	-2.0	Negative	Neutral	Positive
	12m forward Earnings Growth, S&P 500 Index (level, 12-mo avg) Earnings yield S&P 500 Index - UST 10 yield (level, 12-mo avg)	-1.2 -1.1	7.2% 4.6%	11.6% 4.0%	10.0% 4.8%	-2.0 -2.0	Positive Positive	Neutral Neutral	Negative Negative
	, , , , , , , , , , , , , , , , , , ,	Lancara and the state of the st	4.078	4.076	4.070	-2.0	rositive	Neutrai	ivegative
	1		Current	10-yr average	5-yr average				
10%	Sentiment Signal	E COT	Value ²	value	value	-0.7			
	VIX (level, 12-mo avg)	-0.3	24.5	20.5	17.9	0.0	Positive	Neutral	Negative
	Consumer Confidence Index (level, 12-mo avg) AAII Bull-Bear Spread (level, 12-mo avg)	2.0 0.7	103.0	75.0	74.7	-2.0	Negative	Neutral	Positive
	70 M Bull Bull Spicua (level, 12-110 avg)	0.7	-6.3	3.7	8.2	0.0	Negative	Neutral	Positive
15%	Momentum Signal		Current Value ²			-2.0			
	200 DMA: S&P 500 Index (Change from Prior Month: rising = positive, falling = negative)	(7.77)	-12.01	_		-2.0			
	50 DMA: S&P 500 Index (Change from Prior Month: rising = positive, falling = negative)	.64.23	-65.76			-2.0			
	50 DMA - 200 DMA (if 50 DMA>200 DMA; positive)	57.55	-58.95			-2.0			
Data relei lata serie	ased immediate following month-end, with the exception of LEI (19th), GDP Growth (2 months after quarter), Co ss with a lag, the model looks to the latest available data.	nsumer Confidence Index (2-	ith), AAII Bull-B	ear Spread (:	24th). In	,			
l. Z-sco	res based on 5-year historical average. Z-score = measure of standard deviations from mea reen +/-1.	ın ((Value today - mear)/σ). 2/3 of	time, z-sco	ore will				
2. Curre	nt value reflects actual data point as of the most recent period, which may differ from the d 2's 10's spread may differ from the 12 month average.	lata calculation used fo	r the z-score	. For exan	nple, the				

		•)-		*			
1/0			As of			9/30/2015			
N .		cap 03 Equities	9/30/2015	A CAMPAGE				1966	
I	.eger	nd .							
		Negative	-						
		Neutral							
	Bayer C	Positive						Signs	
		*				5-Yr Signal Score (-2 -> -			
				Ì		0.5 = negative, -0.5 -> 0.5		Between -1σ	
	Small	Cap US Equities	Signal	1		= neutral, 0.5 -> 2 = . positive)	More than 1σ Above Average	Average	Less than -1σ Below Average
1			Jigilai			-1.05			
Ę	OVERA	ALL SMALL CAP US EQUITY SIGNAL	- U5			-1.05			
						5-Yr Raw Score (-2 -> -1 = negative, -1 -> 1 = neutral,			
1	Weight		Z-Score ¹			1 -> 2 = positive)			
				Current	5-yr				
	25%	Macro Signal	1, (10)	Value ²	average value	-1.0			
		Leading Economic Index (12-mo % Change)	-0.1	123.7	111.4	0.0	Positive	Neutral	Negative
		2's 10's spread (level, 12-mo avg)	-1.3	1.4%	1.9%	-2.0	Positive	Neutral	Negative
		Corporate profitability, S&P 500 Index Net Margin (12-mo Change) GDP Growth (12-mo Change)	-1.4 -0.3	10.6% 3.9%	10.1% 2.1%	-2.0 0.0	Positive Positive	Neutral Neutral	Negative Negative
		GDF Glowth (12-mo change)	-0.5	3.576	2.170	0.0	1 OSILIVE	reduur	Negative
				Current	5-yr				
	50%	Valuation Signal	+s.(HPRICE)	Current Value ²	average value	-1.0			
		12m forward P/E, Russell 2000 Index (level, 12-mo avg)	1.8	22.5	19.6	-2.0	Negative	Neutral	Positive
·		12m forward P/B, Russell 2000 Index (level, 12-mo avg)	1.0	1.5	1.8	-2.0	Negative	Neutral	Positive
		12m forward Earnings Growth, Russell 2000 Index (level, 12-mo avg)	-1.0 -0.8	25.5%	29.0% 2.89%	0.0	Positive Positive	Neutral Neutral	Negative Negative
		Earnings yield Russell 2000 Index - UST 10 yield (level, 12-mo avg)	-0.0	2.41%	2.09%	0.0	rositive	Neutrai	ivegative
				Cumman	5-yr				
	10%	Sentiment Signal		Current Value ²	average value	0.0			
		VIX (level, 12-mo avg)	-0.3	24.5	17.9	0.0	Positive	Neutral	Negative
		Consumer Confidence Index (level, 12-mo avg)	2.0	103.0	74.7	-2.0	Negative	Neutral	Positive
		AAII Bull-Bear Spread (level, 12-mo avg)	0.7	-6.3	8.2	0.0	Negative	Neutral	Positive
		Gasoline Prices (level, current) Real Wage Growth (% YoY Change)	-1.5 0.3	2.75 0.37%	3.40 0.27%	2.0 0.0	Negative Positive	Neutral Neutral	Positive Negative
		Median Home Price (level, 12-mo avg)	1.8	13	\$ 189,065	2.0	Positive	Neutral	Negative
		BB Credit Spread 1-10year (level, YoY Change)	1.9	456	370	-2.0	Positive	Neutral	Negative
				Current					
9	15%	Momentum Signal .	.2	Value ²		-2.0			
		200 DMA: Russell 2000 Index (Change from Prior Month: rising =	· 1/7*	-3.79					
		positive, falling = negative)		-3.75		-2.0			
		50 DMA: Russell 2000 Index (Change from Prior Month: rising =	-0.1 (40)	-51.84		2.0			
		positive, falling = negative) 50 DMA - 200 DMA (if 50 DMA>200 DMA, positive)		-46.31		-2.0 -2.0	8		
		So DIVIN 200 DIVIN (II So DIVIN 200 DIVIN, positive)	tangan mengangan sama di di Sebit Matana di Sebit mengan sama di Sebit mengan sama di Sebit mengan sama di Seb			2.0			
E	Data relea	ased immediate following month-end, with the exception of LEI (19th), GDP Growth (2	2 months after quarter), Con:	sumer Confiden	ce Index				
[6	24th), AA	All Bull-Bear Spread (24th). In data series with a lag, the model looks to the latest ava	ilable data.						
1		res based on 5-year historical average. Z-score = measure of standard	l deviations from mean	((Value tod	ay-				
1		a). 2/3 of time, z-score will be between +/-1.			m 1100 - F				
		nt value reflects actual data point as of the most recent period, which ore. For example, the current 2's 10's spread may differ from the 12 m		tu calculatio	n usea Jor				
		no or o management ()							
<u> </u>									

pped International Equities Negative Neutral Positive Ped International Equities LL DEVELOPED INTERNATIONAL EQUITY SIGNAL	9/30/2015 Signal			5-Yr Signal Score (-2 -> - 0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 positive)	More than 1 or Above Average	Signs Between -1 \sigma and +1 \sigma From	
Negative Neutral Positive ped International Equities	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =		Between -1σ	
Neutral Positive ped International Equities	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =		Between -1σ	
Positive ped International Equities	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =		Between -1σ	
ped International Equities	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =		Between -1σ	
	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =			
	2 SUMMER TO THE ST			0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 =			
	2 SUMMER TO THE ST			= neutral, 0.5 -> 2 =			
	2 SUMMER TO THE ST			positive)	Above Average	and the frem	Less than -10
LL DEVELOPED INTERNATIONAL EQUITY SIGNAL .	4.13					Average	Below Averag
				-1.19			
				5-Yr Raw Score (-2 -> -1 = negative, -1 -> 1 = neutral,			
	Z-Score ¹			1-> 2 = positive)			
		Cumant	5-yr				
Macro Signal		Current Value ²	average value	-0.6			
	0.0				Positiva	Neutral	Negative
- 1	0.5	123.7		10000000			Negative
's 10's spread German Bunds (level, 12-mo avg)	-2.4	0.8%	1.3%	-2.0			Negative
's 10's spread Japanese Gov't Bonds (level, 12-mo avg)	-1.7	0.4%	0.7%	-2.0	Positive	Neutral	Negative
	0.1	7.5%	7.1%	0.0	Positive	Neutral	Negative
	0.4	1.7%	0.7%	0.0	Positive	Neutral	Negative
DP Growth Japan (12-mo Change)	0.9	1.6%	1.1%	0.0	Positive	Neutral	Negative
		Current	5-yr				
aluation Signal	4.00			-1.5			
	1,8	13.7	12.8	-2.0	Negative	Neutral	Positive
	1.5	1.4	1.4	-2.0	Negative	Neutral	Positive
	-1,3	7.7%	12.0%	-2,0	Positive	Neutral	Negative
arnings yield MSCI EAFE Index - 10 yield Bunds & JGBs (level, 12-mo avg)	-0.5	6.8%	6.6%	0.0	Positive	Neutral	Negative
		Current	5-yr				
entiment Signal	167	Value ²	value	0.0			
	0.3	33.7	23.3	0.0	Positive	Neutral	Negative
	0.0	32.2	23.5	0.0			
		105.6	98.5	0.0	Negative	Neutral	Positive
pan Confidence (level, 12-mo avg)	0.6	40.5	38.7	0.0	Negative	Neutral	Positive
lomentum Signal		Current Value ²		-2,0			
00 DMA: MSCI EAFE Index (Change from Prior Month: rising = positive,		2	- I				
	11 - 27	-13.04		-2.0			
DMA: MSCI EAFE Index (Change from Prior Month: rising = positive,	10 to	70.65		ii (22.2			
The state of the s		-/9.65		-2.0			
DDMA - 200 DMA (if 50 DMA>200 DMA, positive)	21.59	-71.99		-2.0			
d immediate following month-end, with the exception of LEI (19th), GDP Growth (2 months af	ter quarter), Consumer Con	ofidence Index (2	4th), AAII	* 1			
		A - 1	17.1				
	ns Jrom mean ((Value	today - meai	η)/σ).				
value rejlects actual data point as of the most recent period, which may diffe	r from the data calcu	lation used fo	rthe z-				
example, the current 2's 10's spread may differ from the 12 month average.							
	Leading Economic Index Eurozone (12-mo % Change) Leading Economic Index Japan (12-mo % Change) 2/2 10/2 s pread German Bunds (level, 12-mo avg) 2/2 10/2 s pread Japanese Gov't Bonds (level, 12-mo avg) Corporate profitability, MSCI EAFE Index Net Margin (12-mo Change) SDP Growth Eurozone (12-mo Change) SDP Growth Japan (12-mo Change) SDP Growth Japan (12-mo Change) // E12m forward, MSCI EAFE Index (level, 12-mo avg) Earnings Growth 12m forward, MSCI EAFE Index (level, 12-mo avg) Earnings Growth 12m forward, MSCI EAFE Index (level, 12-mo avg) Earnings yield MSCI EAFE Index - 10 yield Bunds & JGBs (level, 12-mo avg) Earnings yield MSCI EAFE Index - 10 yield Bunds & JGBs (level, 12-mo avg) Sentiment Signal Euro VIX (level, 12-mo avg) Euro Confidence (level, 12-mo avg) Euro Confidence (level, 12-mo avg) Momentum Signal 200 DMA: MSCI EAFE Index (Change from Prior Month: rising = positive, alling = negative) 50 DMA: MSCI EAFE Index (Change from Prior Month: rising = positive, alling = negative) 50 DMA - 200 DMA (if 50 DMA>200 DMA, positive) end immediate following month-end, with the exception of LEI (19th), GDP Growth (2 months of the latest available data. s based on 5-year historical average. Z-score = measure of standard deviation e, z-score will be between +/-1.	Leading Economic Index Eurozone (12-mo % Change) Leading Economic Index Japan (12-mo % Change) 2/s 10/s spread German Bunds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s spread Japanese Gov't Bonds (level, 12-mo avg) 2/s 10/s Spread Japanese Gov't Bonds (level, 12-mo avg) 3/s 10/s 12-mo Change) 3/s 12-mo Change) 3/s 12-mo Change) 3/s 12-mo Change) 3/s 12-mo Forward, MSCI EAFE Index (level, 12-mo avg) 4/s 12-mo forward, MSCI EAFE Index (level, 12-mo avg) 4/s 12-mo avg) 5/s 12-mo avg) 6/s 13-mo avg	Leading Economic Index Eurozone (12-mo % Change) Leading Economic Index Japan (12-mo % Change) Leading Economic Index Japan (12-mo % Change) 0.5 123.7 25: 10's spread German Bunds (level, 12-mo avg) 25: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 25: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 25: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 26: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 27: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 28: 10's spread Japanese Gov't Bonds (level, 12-mo avg) 29: 10's Growth Eurozone (12-mo Change) 30: 10: 10: 10: 10: 10: 10: 10: 10: 10: 1	Leading Economic Index Eurozone (12-mo % Change)	Leading Economic Index Eurozone (12-mo % Change) 0.0 10.26 101.3 0.0 Leading Economic Index Japan (12-mo % Change) 0.5 101.3 10.0 Leading Economic Index Japan (12-mo % Change) 0.5 101.3 111.6 0.0 Sz 10's spread German Bunds ((evel, 12-mo avg) 2-24 0.88 1.39 2-20 25 10's spread Japanese Gov't Bonds ((evel, 12-mo avg) 1.7 0.4% 0.7% 2-20 Corporate profitability, MSCI EAFE Index Net Margin (12-mo Change) 0.1 7.5% 7.1% 0.0 SDP Growth Eurozone (12-mo Change) 0.4 1.7% 0.7% 0.0 SDP Growth Izrocone (12-mo Change) 0.4 1.7% 0.7% 0.0 SDP Growth Japan (12-mo Change) 0.9 1.6% 1.1% 0.0 Current Value Va	Leading Economic Index Eurozone (12-mo % Change) 0.0 102.6 101.3 0.0 Positive	Leading Economic Index Eurozone (12-mo % Change) 0.0 102.6 101.3 0.0 Positive Neutral Leading Economic Index Japan (12-mo % Change) 0.5 123.7 111.6 0.0 Positive Neutral 22.5 0/5 spread Germa Bunds (Level, 12-mo avg) 2.4 0.8% 1.3% -2.0 Positive Neutral 22.5 0/5 spread Japaneses Gov't Bonds (Level, 12-mo avg) 1.7 0.4% 0.7% -2.0 Positive Neutral 1.7 0.4% 0.7% 0.0 Positive Neutral 0.0 Negative Neutral 0.0

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DDIA	Asset Class Valuation Model	7 - LUNGS (8777) (1998)	NO.4	W. 1785 50	0/00/0045		4. VELEN.	
		As of 9/30/2015			9/30/2015			
Lege			Mary Control of the	by scale vale.				
	Negative		•					
	Neutral							
	Positive						Signs	
Emer	ging Markets Equity	Signal			5-Yr Signal Score (-2 -> - 0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 = positive)	More than 1σ Above Average	Between -1σ and +1σ From Average	Less than -1σ Below Average
OVER	ALL EMERGING MARKETS EQUITY SIGNAL	-0.48		e e	-0.48			
Weigh	方有24TEM图	Z-Score ¹			5-Yr Raw Score (-2 -> -1 = negative, -1 -> 1 = neutral, 1 -> 2 = positive)			
25%	no CDP growth export, import no 2's 10's spread BRIC s Brazh Russia Macro Signal Corporate profitability, MSCI EM Index Net Margin (14mo Difference) Brent Crude Oil (%YoY)	1.00 0.6	Current Value ² 10.1 48.4	5-yr average value 11.0 99.0	1.0 0.0 2.0	Negative Negative	Neutral Neutral	Positive Positive
50%	Valuation Signal P/E 12m forward, MSCI EM Index (level, 12-mo avg) P/B 12m forward, MSCI EM Index (level, 12-mo avg) P/E Last Twelve Months	-0.67 1.7 -0.8 0.8	Current Value ² 10.7 1.2 11.9	5-yr average value 10.6 1.4 11.9	-0.7 -2.0 0.0 0.0	Negative Negative Negative	Neutral Neutral Neutral	Positive Positive Positive
10%	Sentiment Signal EM Consumer Confidence Composite Index (Z-Score)	-1.00 -1.49	Current Value ² -1.49	5-yr average value	-1.0 -2.0	Negative	Neutral	Positive
	MSCI-EM Quarterly Volatility (%, daily)	0.00	1.33	0.99	0.0	Negative	Neutral	Positive
15%	Momentum Signal	-2.00	Value ²		-2.0			
	50 DMA: MSCI EM Index (Change from Prior Month: rising = positive, falling = negative)	-66.54	-66.54		-2.0			
h	50 DMA - 200 DMA (if 50 DMA>200 DMA, positive) 200 DMA ? 图中EMPV200 可要要明化	-113.71	-113.71		-2.0			
	3 Month Returns: MSCI EM Index 10上,因有解。	-18.53%	-18.53%		-2.0			, i
1. Z-sco 2. Curr	P4th). In data series with a lag, the model looks to the latest available data. In data series with a lag, the model looks to the latest available data. In the series based on 5-year historical average. Z-score = measure of standard deviation In the current period, which may differ from the 12 month average. In the current 2's 10's spread may differ from the 12 month average.							4

PRIM A	Asset Class Valuation Model	As of			9/30/2015	表 中		N. P. S.
Interes	t Rate Model	9/30/2015			7-0-0-8-5-174			
Legend	l Negative Neutral	<u>.</u>	e.					
206	Positive				-		Signs	
	t Date Mardel	Signal			5-Yr Signal Score (-2 -> - 0.5 = negative, -0.5 -> 0.5 = neutral, 0.5 -> 2 = positive)	More than 1σ Above Average	Between -1 o and +1 o From Average	Less than -1 o
	t Rate Model	Signal				Above Average	Average	below Average
OVERAI	LL INTEREST RATE MODEL SIGNAL	0,81			0.81			
Weight		Z-Score ¹			5-Yr Raw Score (-2 -> -1 = negative, -1 -> 1 = neutral, 1 -> 2 = positive)			
weight		2-300/6	Current	5-уг	1->2 = positive/			
25%	Macro Signal	1.0	Value ²	average value	1.0			
	Liquidity Signal	rangeseammene original						
	Inflation Expectations (5yr5yr Fwd Break-even 12m change)	-1.2	1.8	-0.1	2.0	Negative	Neutral	Positive
	2's 10's spread (level, 12-mo avg)	-1,3	1.4%	2.0%	2.0	Negative	Neutral	Positive
	FF6 Expectations - taylor rule (12m change)	0.6	-1.8	-2.7	0.0	Positive	Neutral	Negative
	GDP Growth (12-mo Change)	-0,3	#N/A	0.0	0.0	Negative	Neutral	Positive
50%	Valuation Signal	0,4	Current Value ²	5-yr average value	0.4			
	10yr - GDP YoY (Factset) Level	-1.0	#N/A	0.3	2.0	Negative	Neutral	Positive
	Real Yields (10yr TIPS Yield) Level	0.9	0.5	0.2	0.0	Positive	Neutral	Negative
	Global Relative Value (US-Europe from FactSet)	1.2	1.5	0.7	1.0	Positive	Neutral	Negative
	Global Relative Value (US-Japan from FactSet)	0,3	1.7	1.6	0.0	Positive	Neutral	Negative
	Domestic Relative Value (IG Spreads from FactSet) Fed Model (Inverse to equity model)	0.7 -0.4	160 4.5	140 5.0	0.0 0.0	Negative Negative	Neutral Neutral	Positive Positive
	2-10's spot vs FWD Curve (change from Bloomberg)	-0.7	-0.3	-0.1	0.0	Positive	Neutral	Negative
10%	Sentiment Signal	0.5	Current Value ²	5-yr average value	0.5			
	Move Index	0.3	82.2	77.0	0.0	Positive	Neutral	Negative
	JPM Duration survey	0.1	-2.0	-3.4	0.0	Negative	Neutral	Positive
ŧ	CFTC Postioning Consumer Confidence	0.3 1.8	-8,529 103.0	-36,309 74.7	0.0 2.0	Negative Positive	Neutral Neutral	Positive Negative
15%	Momentum Signal	2.0	Current Value ²]	2.0			
	200 DMA: 10 year yield (Change from Prior Month: rising = negative, falling = positive)		0.00		2.0			
	50 DMA: 10 year yield (Change from Prior Month: rising = negative, falling = positive) 50 DMA - 200 DMA (if 50 DMA>200 DMA, negative)		-0.08 -0.07		2.0 2.0			
AAII Bull-Bei 1. Z-scores mean)/σ). 2. Current	d immediate following month-end, with the exception of LEI (19th), GDP Growth (2 m or Spread (24th). In data series with a log, the model looks to the latest coaliable data is based on 5-year historical average. Z-score = measure of standard di 2/3 of time, z-score will be between +/-1. value reflects actual data point as of the most recent period, which m or example, the current 2's 10's spread may differ from the 12 month a	eviations from mean ((\ ay differ from the data	∕alue today	-		C		

PRIM	Asset Class Valuation Model	As of		400	9/30/2015			
Credi	t Model	9/30/2015						
Leger	nd							
	Negative		10					
1.00	-							
500 E 17 (632)	Neutral							
3.0	Positive						Signs	
					5-Yr Signal Score (-2 -> -	~		
					0.5 = negative, -0.5 -> 0.5		Between -1σ	
Crodit	Model	Signal			= neutral, 0.5 -> 2 = positive)	More than 1σ Above Average	and +1 o From Average	Less than -1σ Below Average
Credit Model		Jigilai				Above Average	Average	below Average
OVER	ALL CREDIT MODEL SIGNAL	-0.2			-0.17			
	* *				1			
					5-Yr Raw Score (-2 -> -1 =			
		1			negative, -1 -> 1 = neutral,			
Weight		Z-Score ¹		5-yr	1 -> 2 = positive)	Ī		
			Current	average				
25%	Macro Signal	-14	Value ²	value	-1.6			
	Inflation Expectations (5yr5yr Fwd Break-even)	-1.2	1.8	2.5	-2.0	Positive	Neutral	Negative
	2's 10's spread (level, 12-mo avg)	-1.3	1.4%	1.9%	-2.0	Positive	Neutral	Negative
	Corporate profitability, S&P 500 Index Net Margin (12-mo Change)	-1.2	10.6	10.2	-2.0	Positive	Neutral	Negative
	Debt/EBITDA (12M Change)	1.3	3.5	3.5	-2.0	Negative	Neutral	Positive
	GDP Growth (12-mo Change)	-0.3	3.9	2.1	0.0	Positive	Neutral	Negative
			Current	5-yr average				
50%	Valuation Signal	2.0	Value ²	value	1.0			
	BBB Spreads (Current Level)	1.1	229.0	189.9	2.0	Positive	Neutral	Negative
	IG-HY spreads (Current Level)	1.5	502.0	384.9	2.0	Positive	Neutral	Negative
	12m forward Earnings Growth, Russell 2000 Index (level, 12-mo avg)	-0.9	25.5	34.4	0.0	Positive	Neutral	Negative
	Earnings yield Russell 2000 Index - UST 10 yield (level, 12-mo avg)	-0.5	2.4%	2.9%	0.0	Positive	Neutral	Negative
			Current	5-yr				
10%	Sentiment Signal		Value ²	average value	0.3			
	VIX (level, 12-mo avg)	-0.3	24.5	17.9	0.0	Positive	Neutral	Negative
	Consumer Confidence Index (level, 12-mo avg)	2.0	103.0	74.7	-2.0	Negative	Neutral	Positive
	CCC Ratio (12m Average)	-1.8	14.4%	16.4%	2.0	Negative	Neutral	Positive
	Distressed Ratio (12m Average)	0,0	6.7%	6.6%	0.0	Positive	Neutral	Negative
	HY Spread Vol (12m Std Dev)	0.0	227.5	223.7	0.0	Negative	Neutral	Positive
	Distressed Trading Activity (12m Average)	3,1	269.4	149.3	2.0	Positive	Neutral	Negative
	C&I Loan Demand (senior loan officer survey, 4q average)	-0.1	10.0	12.6	0.0	Positive	Neutral	Negative
			Current					
15%	Momentum Signal		Value ²		-2.0	l,		
	200 DMA: IG Credit spread (Change from Prior Month: rising =		0.03		2.0			
	negative, falling = positive) 50 DMA: IG Credit spread (Change from Prior Month: rising =	50.5001			-2.0			
	negative, falling = positive)	0.4,	0.06		-2.0			
	50 DMA - 200 DMA (if 50 DMA>200 DMA _negative)		0.03		-2.0			
	50 DMA - 200 DMA (if 50 DMA>200 DMA, negative)	-2.0						
(24th), AA	ised immediate following month-end, with the exception of LEI (19th), GDP Growth (2 Il Bull-Bear Spread (24th). In data series with a lag, the model looks to the latest ava	llable data.						
	res based on 5-year historical average. Z-score = measure of standard	l deviations from mean	((Value tod	ay-				
	a). 2/3 of time, z-score will be between +/-1.							
	nt value reflects actual data point as of the most recent period, which		ta calculatio	n used for				
tne z-sc	ore. For example, the current 2's 10's spread may differ from the 12 m	ontn average.						