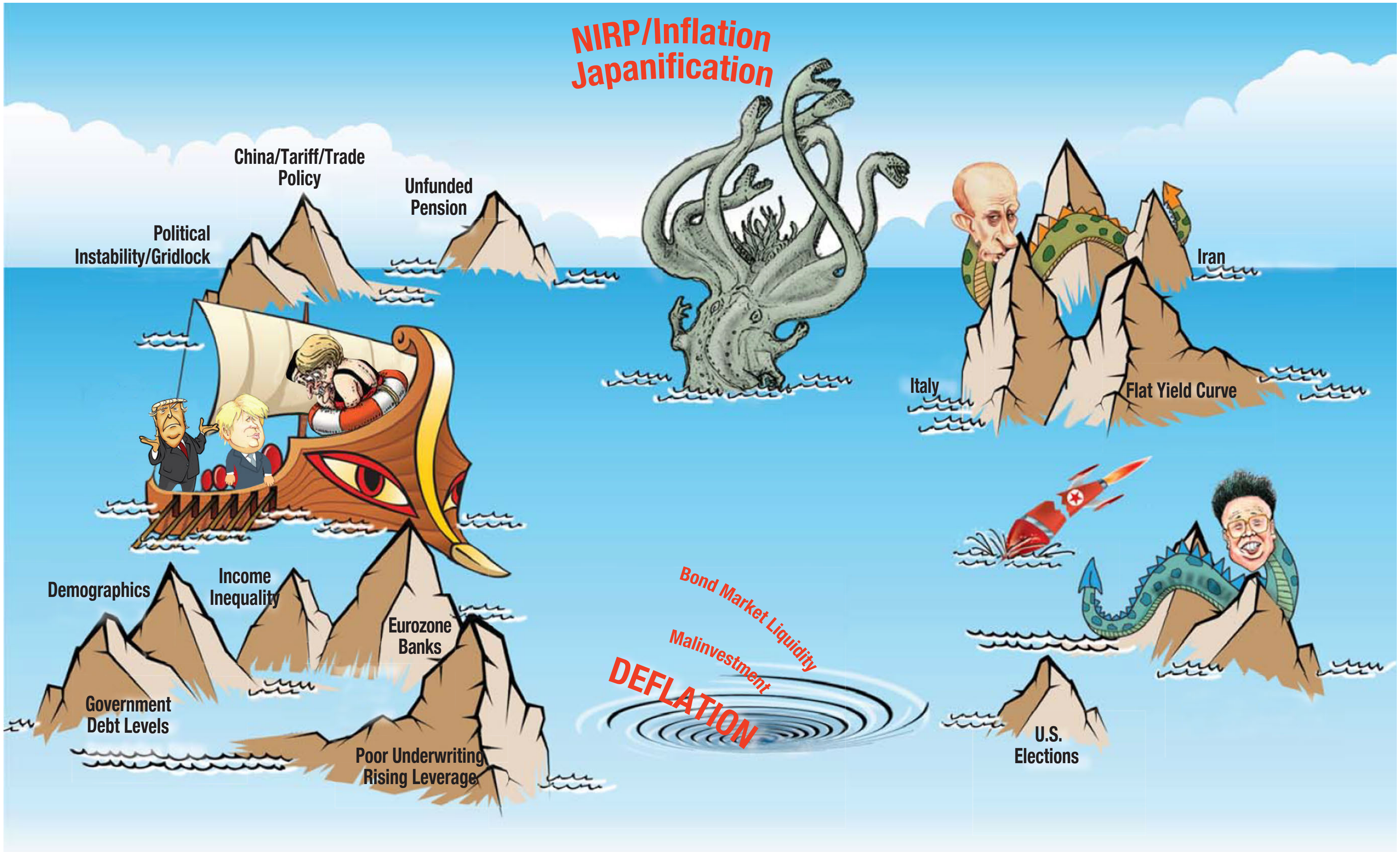
The Odyssey: 10 Years Later… Time for a Change?

SEPTEMBER 2019



The Odyssey

- Rules of the Sea
  - Human Nature and Uncertainty: Zeus/Hubris/Science
- The Odyssey
  - The Aftermath (Great Recession 2008)
  - Into the Land of the Lotus Eaters… Central Bank Policy Designed to Make Us Forget
  - Circle and Sorcery of Banking, Currency and Fraud Money
  - Cycloptic Credit Analysis- In the Land of the Blind…
  - Scylla and Charybdis: The Policy Makers’ Dilemma
  - With Calypso: The Tranquil Captivity of Easy Money
- The Homecoming
- Philosophy for Calm and Rough Waters

Rules of the Sea:
Human Nature and Uncertainty Don't Mix Well

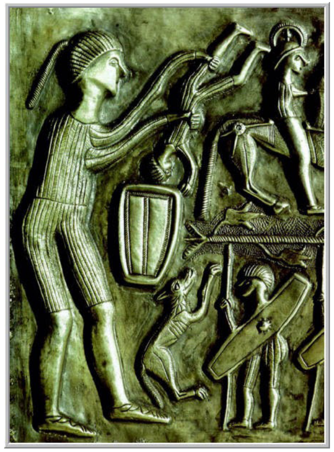
THEN

Romans

Bronze Diagram of a Sheep's Liver Found at Picenum

Celtic Art

Gundestrup Cauldron (1st Century BC)

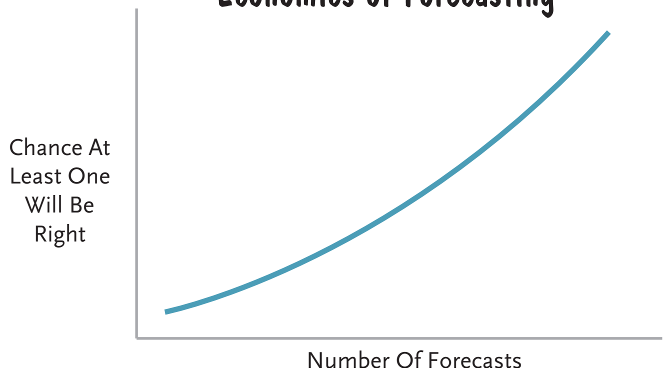


NOW

Statistics/Models

Economists

Economics of Forecasting



The Aftermath of War (Great Recession)

Trojan Horse: Hellenistic vase 8th century B.C.
Archaeological Museum of Mykonos

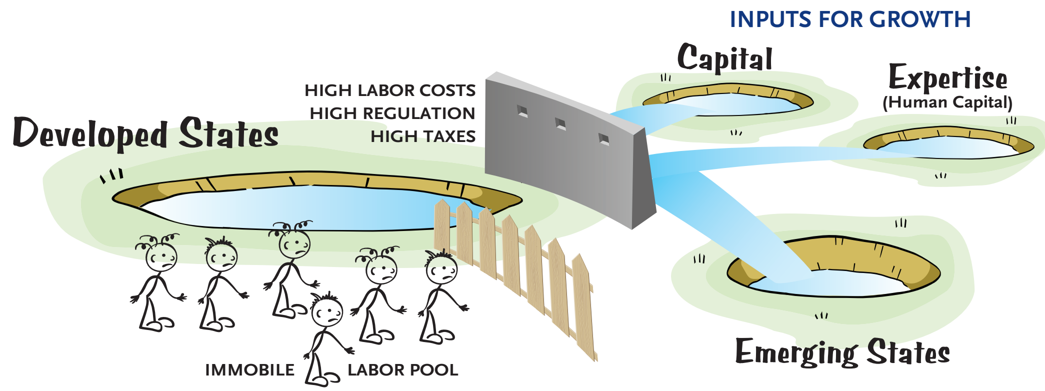
The Aftermath:

Dire Straits: Take Aways – 2012

- Globalization driving towards a long-term equilibrium

- Equilibrium will be achieved through:
  - Wage changes
  - Regulation
  - Currency adjustment

Nation States in the Presence of Free Movement of Capital/Expertises



Competition Leads to Winners/Losers (and Tensions)

Key Resources

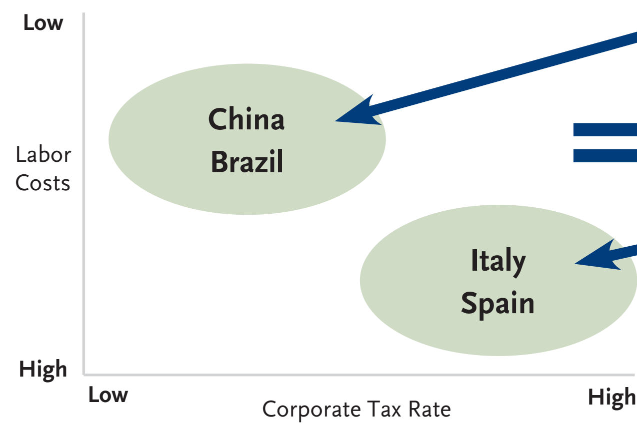
PHYSICAL CAPITAL

MANAGEMENT EXPERTISE (Human Capital)

Highly Mobile

+

Divergent Labor, Tax, Regulatory Costs



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WINNERS

Capital Owners (Shareholders)

Low Cost Labor

Low Tax/Low Cost States

LOSERS

High Cost/Low Mobility Labor

High Tax/High Regulation States

The Aftermath:

The Fed’s Conundrum

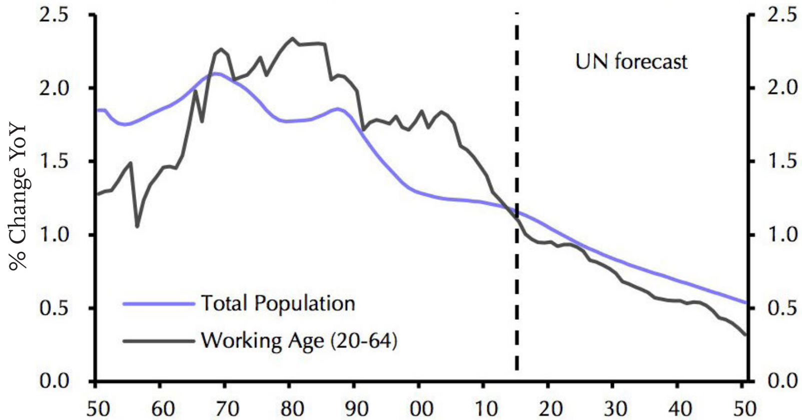
The point is simply that from an empirical point of view, a credit boom and a financial crisis together appear to be a very potent mix that correlate with abnormally severe downward pressures on growth, inflation, credit and investment for long periods. A “normalization” of the economy on all these dimensions just takes much longer under such a scenario.

In terms of historical resonance, these results have a deep ring to them as we contemplate the current crisis. Exposure to a credit boom can make recessions painful, but when combined with an adverse fiscal position at the onset of the crash, economies are perhaps even more vulnerable.

Alan M. Taylor
The Great Leveraging, July 2012

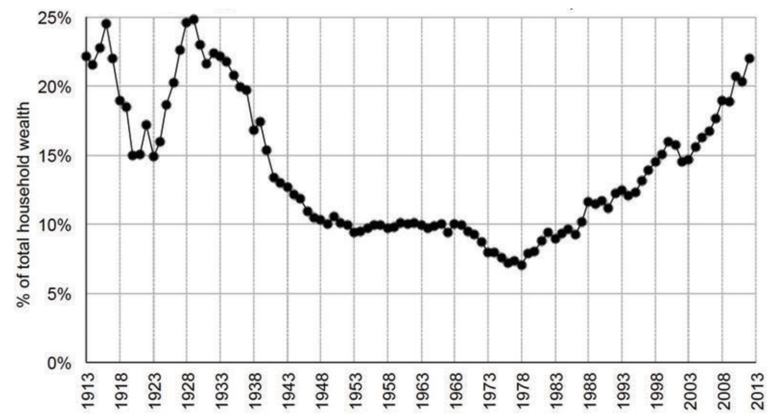
The Aftermath: Some Unpleasant Secular Facts

Working Age Population Growth Decelerating



Source: United Nations

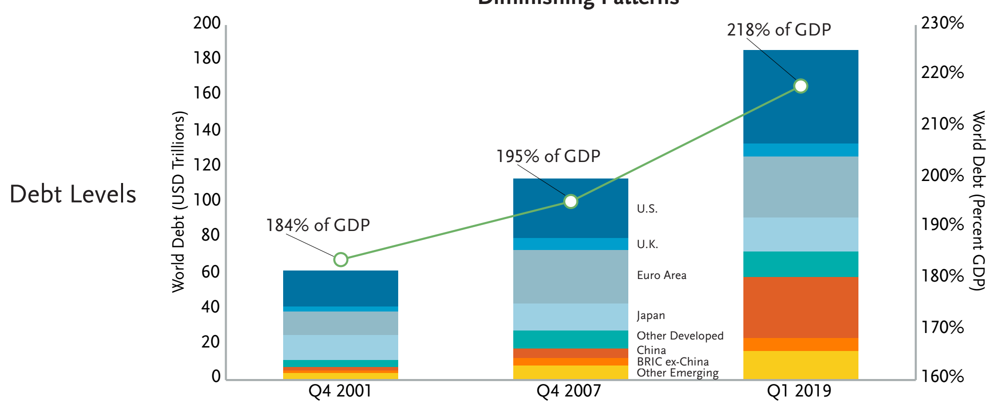
Top 0.1% Wealth Share in the U.S., 1913-2012



This figure depicts the share of total household wealth held by the 0.1% richest families, as estimated by capitalizing income tax returns. In 2012, the top 0.1% includes about 160,000 families with net wealth above $20.6 million. Source: NBER

QE and Low (Negative) for Longer has Enabled a Vast and Systematic Build of Global Debt

Diminishing Patterns



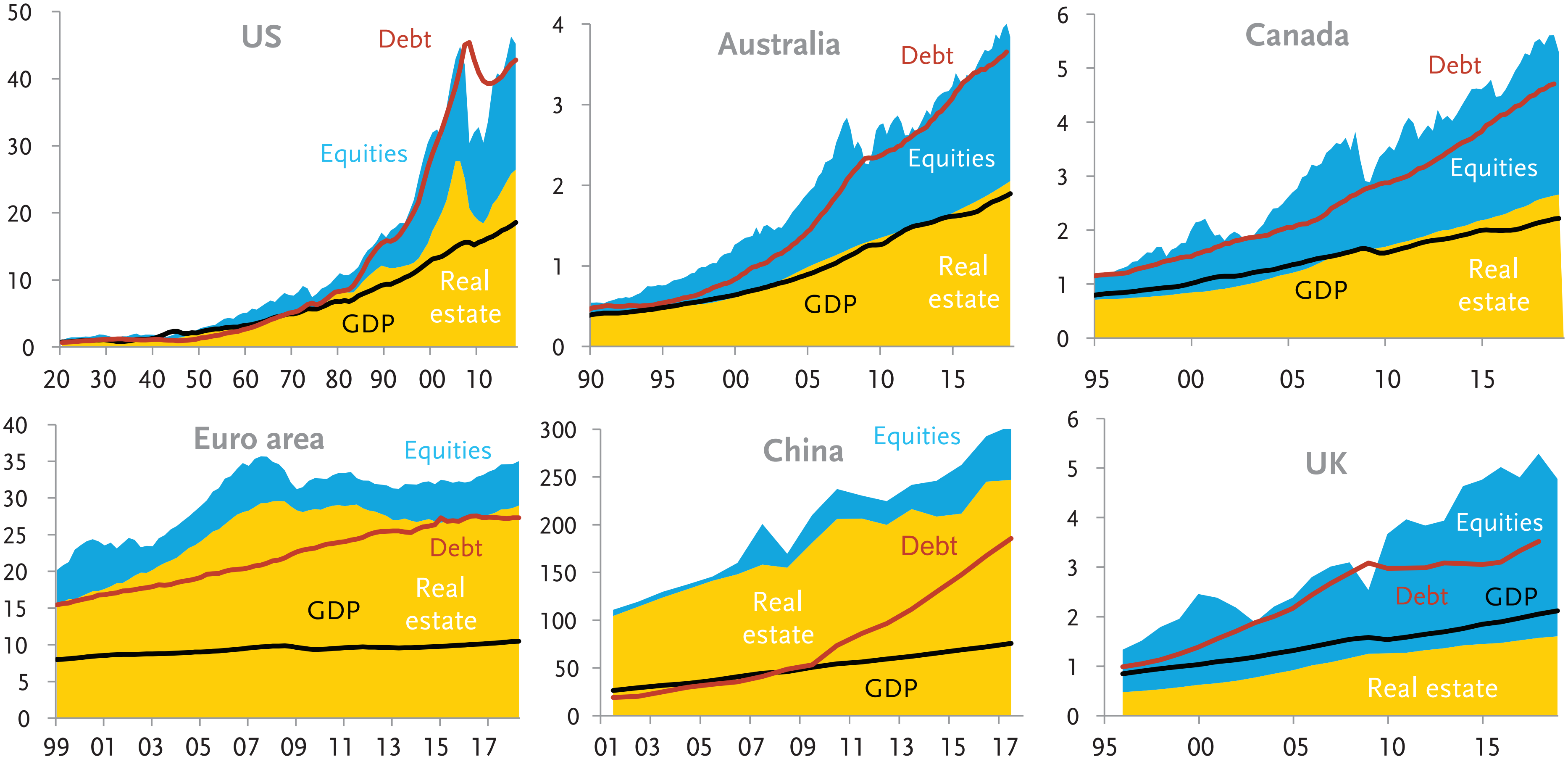
Source: IIF, IMF

TCW

Asset Prices Have Globally Decoupled from Reality (GDP)

Asset Prices Track Debt Levels And Have Risen Much Faster Than GDP

(Private Non-financial debt, in local currency, trillions)



Source: Citi, BIS, national central banks StatCan, WFE, Savills.

US and China are at constant 2009 $ and RMB, others are nominal. Uses household holdings of real estate as proxy where no direct market cap available.

Aftermath of War: Avoidance, but Recessions Are Not Optional: Over Time, Resources Must Be Re-Purposed

- **Central Banking narrative** is:
  - Recessions are caused by a loss of confidence causing consumer demand and business activity to contract
  - Lower rates can cure all ills and so long as there is no inflation (whatever that means!), rates can be kept low forever

- This is misplaced: **Recessions are inevitable**
  - Technological obsolescence, changing consumer tastes, new competitors, overcapacity, rising input costs (e.g. labor) require adaption, re-positioning, re-structuring or liquidation
  - Enterprises that once were thriving may go profit-less
  - Inefficiently allocated labor and capital must be re-purposed

Results

→ Re-Purposing involves friction – time, money, and trial and error – it is not solved by negative rates

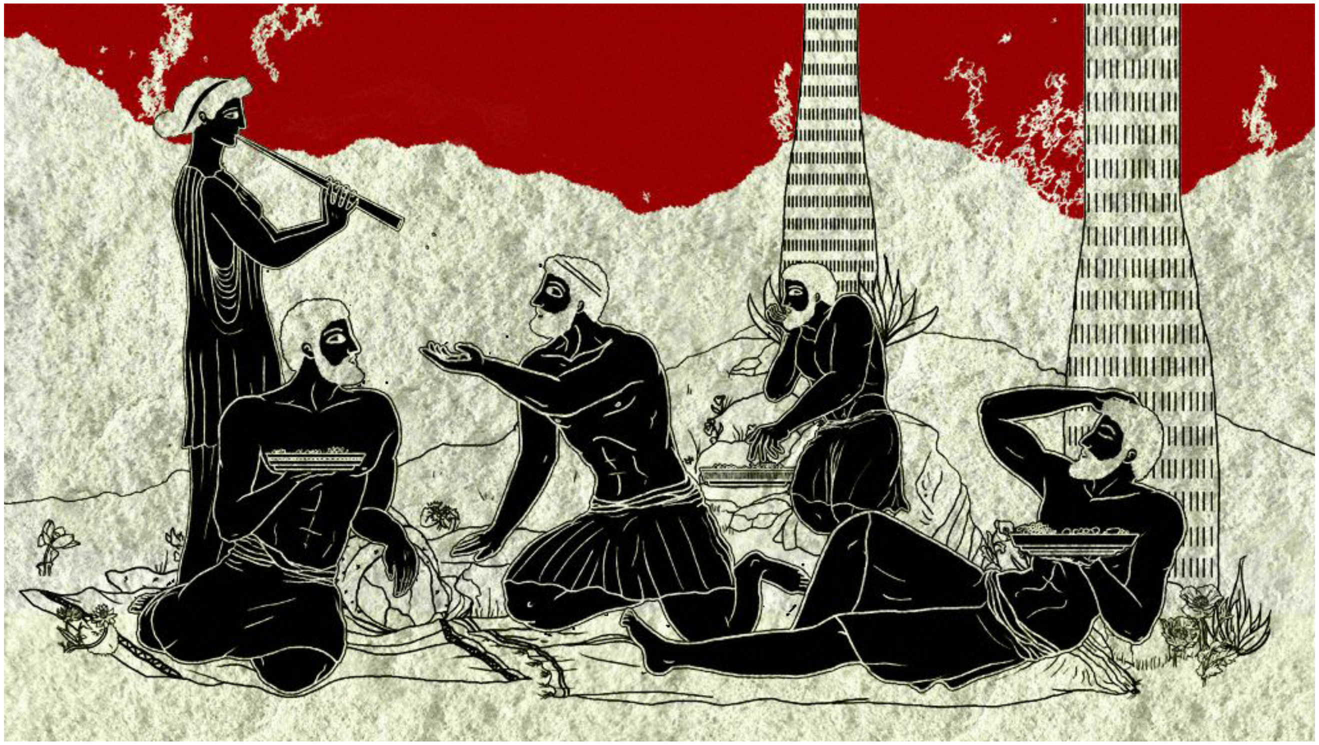
→ Output – therefore incomes – are lost during the repositioning

→ Loss of incomes is generally misunderstood as a shortfall in demand, fixable by lower rates

→ Unemployment rises, debt is restructured or written-off, asset values crater

→ Successful re-purposing results in a new growth cycle

The Lotus Eaters: Central Banks, Extraordinary Monetary Policy Designed to Make Us Forget



The Lotus Eaters: Central Bank Induced Credit Explosion

Credit is Like Money: Whether Its Effects Are Positive or Negative Depends on What It Is Used For

- Central banks can create credit **cost-lessly** and **without limit**
  - Fiat money is "superabundant", like the air

- Credit is only useful to the extent that it is used to command resources or purchase assets
  - Real world resources and assets are <u>not</u> unlimited, they are "scarce" and have an associated (opportunity)cost
  - More money printing re-distributes wealth to those with access to the cheap credit (and away from savers and pension funds)
  - Face it: "free" money leads to a loss of discipline and waste

Results

→ Central banks have cast themselves as King Canute, using cheap credit to drive back the tides of inefficiency

→ Inefficient enterprises are not made efficient by adding more leverage to their capital structure

→ <u>Thought experiment:</u> if an oil driller borrowed funds predicated on a future of $100+ oil, exactly how can that business' leverage be <u>fixed</u>, unless oil is sent back above $100?

→ Attempts to administrate prices – such as interest rates – independent of their true opportunity costs will fail to restart the engines of growth

The Lotus Eaters: Central Bankers' Mission

Long-Term "Secret" Mission

Inflation = Demand Factors + Supply Factors + **Inflation Expectations**

"Secret Plan"

TOOLS: NIRP/ZIRP, QE, "Crazy Talk"

OBJECTIVE: More Inflation

DESIRED RESULTS:

- Raise Nominal Growth
- Raise Asset Prices
- Lower Currency
- Lower Real Wages

- Faster Deleveraging
- Higher Growth Higher Consumption
- Easier Reallocation of Global Resources

The Lotus Eaters: Is the "Problem" with Negative Rates that They're Not Negative Enough?

This Was Then (Nov. 8, 2018)...

	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	15Y	20y	30Y
Portugal	-0.16	-0.02	0.39	0.74	0.91	1.39	1.60	1.77	1.94	2.48	2.73	3.04
Spain	-0.15	-0.02	0.33	0.57	0.86	1.10	1.30	1.48	1.61	2.10	2.23	2.73
Ireland	-0.48	-0.30	-0.12	0.00	0.27	0.49	0.66	0.83	1.00	1.48	1.64	1.80
Belgium	-0.51	-0.36	-0.17	0.08	0.20	0.39	0.56	0.72	0.85	1.25	1.52	1.77
France	-0.40	-0.21	-0.05	0.15	0.21	0.38	0.54	0.64	0.82	1.22	1.33	1.69
Sweden	-0.40	-0.25	-0.10	0.14	0.23	0.32	0.41	0.50	0.67	1.06	1.34	--
Austria	-0.55	-0.41	-0.19	-0.04	0.13	0.30	0.47	0.56	0.66	1.10	1.17	1.46
Finland	-0.54	-0.43	-0.19	-0.02	0.07	0.31	0.42	0.60	0.73	1.05	1.14	1.30
Netherlands	-0.64	-0.49	-0.30	-0.12	0.05	0.20	0.33	0.47	0.58	0.82	0.92	1.13
Germany	-0.59	-0.47	-0.31	-0.14	-0.03	0.08	0.21	0.33	0.46	0.72	0.88	1.08
Japan	-0.14	-0.12	-0.11	-0.08	-0.06	-0.02	0.01	0.07	0.12	0.37	0.66	0.89
Switzerland	-0.78	-0.69	-0.52	-0.44	-0.31	-0.22	-0.15	0.07	0.00	0.34	0.46	0.57

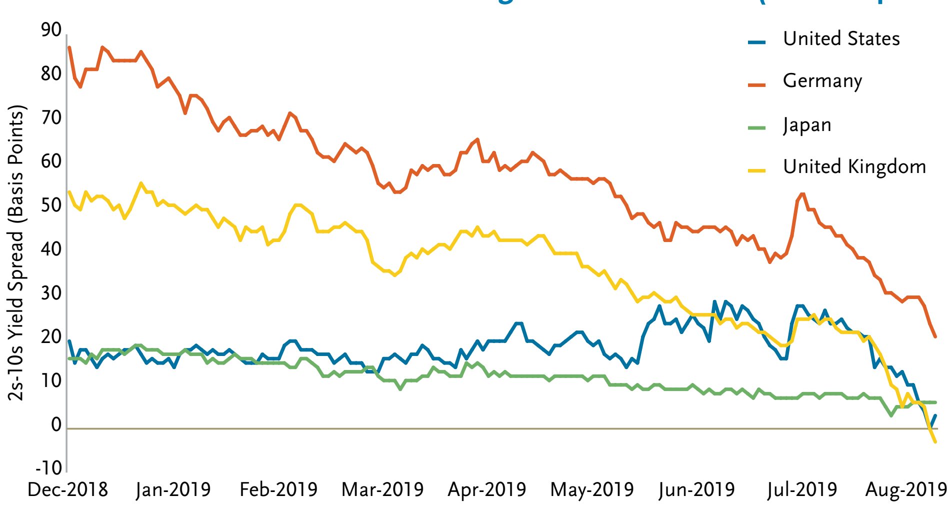
Source: Bloomberg

...This Is Now (Aug. 30, 2019)

	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	15Y	20y	30Y
Portugal	-0.65	-0.51	-0.39	-0.35	-0.20	-0.13	-0.06	0.04	0.12	0.50	0.67	1.01
Spain	-0.57	-0.56	-0.44	-0.37	-0.25	-0.16	-0.08	0.01	0.10	0.52	0.53	0.99
Ireland	-0.72	-0.68	-0.64	-0.56	-0.45	-0.36	-0.27	-0.18	-0.09	0.21	0.39	0.74
Belgium	-0.83	-0.83	-0.76	-0.67	-0.63	-0.56	-0.49	-0.42	-0.35	-0.06	0.15	0.52
France	-0.84	-0.87	-0.85	-0.77	-0.70	-0.63	-0.56	-0.49	-0.41	-0.10	0.00	0.43
Sweden	-0.66	-0.71	-0.75	-0.73	-0.67	-0.60	-0.54	-0.48	-0.37	-0.20	0.05	--
Austria	-0.83	-0.82	-0.80	-0.74	-0.70	-0.61	-0.58	-0.53	-0.44	-0.20	-0.09	0.16
Finland	-0.85	-0.82	-0.79	-0.79	-0.68	-0.64	-0.55	-0.50	-0.42	-0.26	-0.16	0.03
Netherlands	-0.90	-0.92	-0.89	-0.83	-0.76	-0.72	-0.65	-0.61	-0.55	-0.42	-0.22	-0.19
Germany	-0.93	-0.96	-0.97	-0.93	-0.92	-0.88	-0.83	-0.76	-0.70	-0.55	-0.41	-0.18
Japan	-0.31	-0.31	-0.34	-0.35	-0.37	-0.38	-0.38	-0.33	-0.28	-0.09	0.05	0.15
Switzerland	-1.17	-1.18	-1.17	-1.14	-1.10	-1.08	-1.08	-1.10	-1.05	-0.84	-0.76	-0.61

Source: Bloomberg

Fast and Furious Yield Curve Flattening Across the Globe (2s-10s Spread)



Source: Bloomberg

TCW

The Lotus Eaters:

In-depth Analysis of Central Bank Exit Strategy

"No, Thursday's out. How about never – is never good for you?"

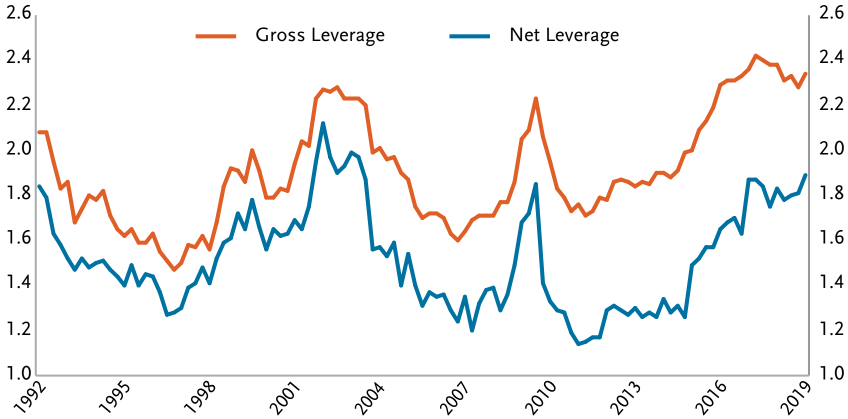
Cycloptic Credit Analysis in the Land of the Blind

Head of Polyphemos, Greek circa 150 B.C., MFA, Boston

Cycloptic Credit Analysis: ...If You Just Keep One Eye Open...

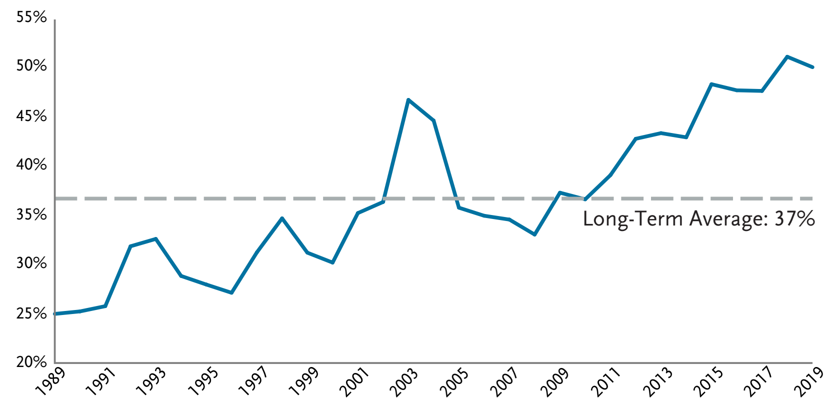
The Late Cycle in Investment Grade Credit Has Been Apparent for Quite Some Time

Net and Gross Median Leverage for U.S. Non-Financial High Grade Issuers



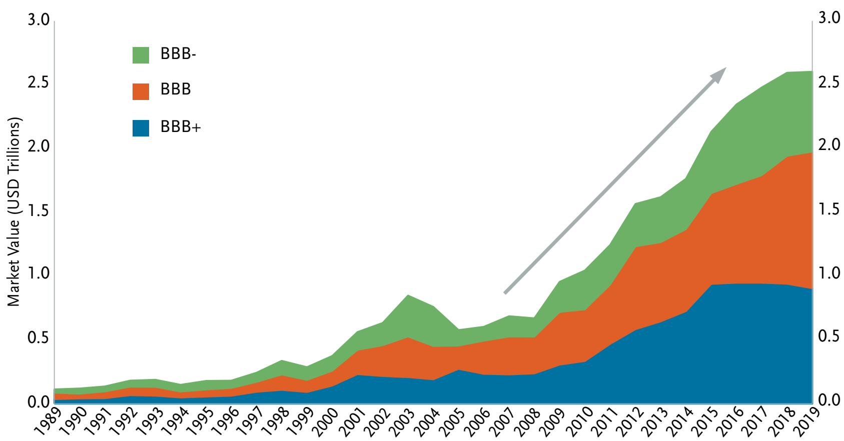
Source: Morgan Stanley

BBB Rated Bonds Comprise Half of IG Corporate Index



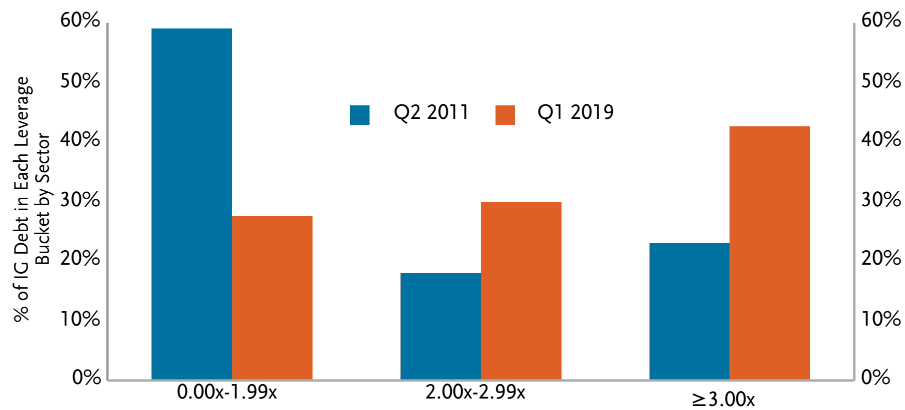
Source: Morgan Stanley; As of August 1, 2019

BBBs: Nearly 4x the Amount Outstanding vs. 2007



Source: Moody's, TCW

Nearly Half of all IG Corporate Issuers Are At Least 3x Levered (Net Basis)



Source: Morgan Stanley

Cycloptic Credit Analysis: No Man Did This! (Well, Maybe Private Equity Helped)

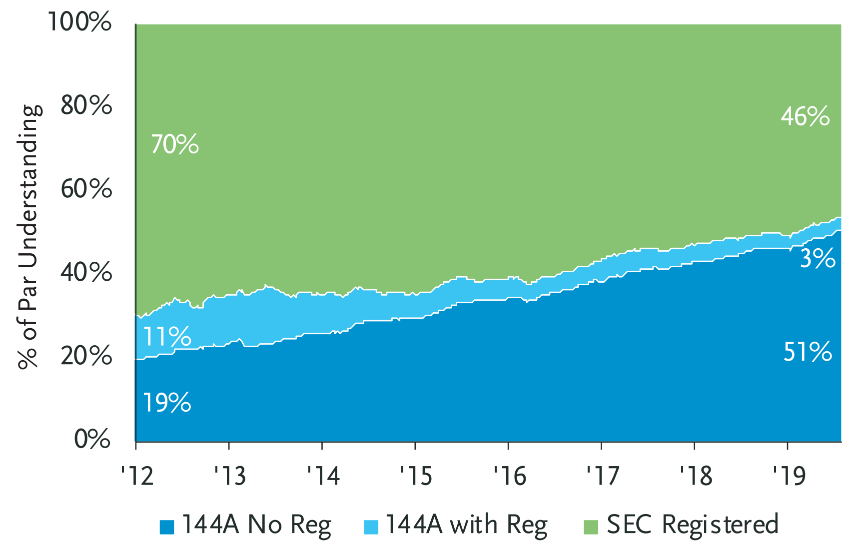
Leveraged Credit Has Gone Increasingly "Dark"

Market Size (Billions)	2008	2019	
Leveraged Loans	$605	$1,212	~80% of loan issuers have no public securities, limiting financial disclosure
High Yield Bonds	$857	$1,278	~62% of issuers have only 144(a) bonds
144(a) High Yield	*$106*	*$660*	*144(a)s grew from 12% of HY market in 2008 to 52% currently*
Private Debt	$246	$638	Not traded, limited or no financial disclosure
Total	$1,708	$3,128	

Source: JPM, Bloomberg Barclays, Prequin

- Financial disclosure requirements have been severely eroded
- Poor information flow means:
  - Investors drop challenged credits like "hot potatoes"
  - A liquidity crisis is all but inevitable

Over Half of U.S. High Yield Is Now 144A



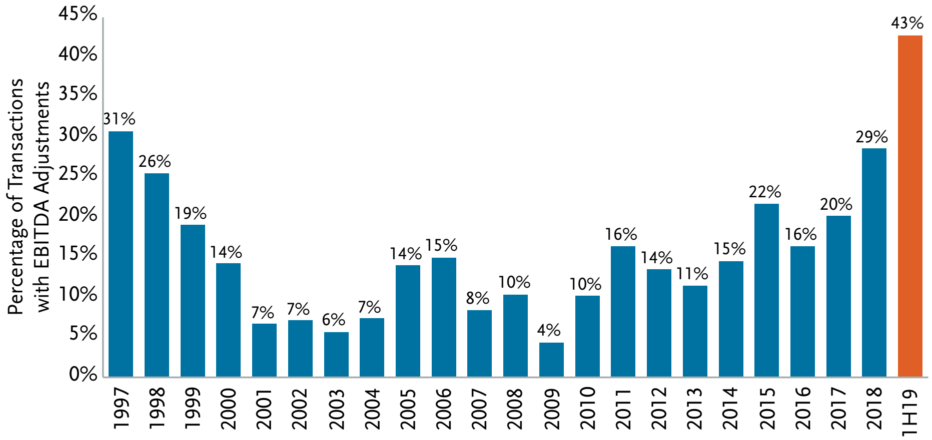
Source: Bloomberg, Barclays

Cyclopitc Credit Analysis:

Debts Are Real and Sum Certain – Profits Are Accounting Constructs

"The less prudence with which others conduct their affairs, the greater the prudence with which we should conduct our own affairs." – Warren Buffett

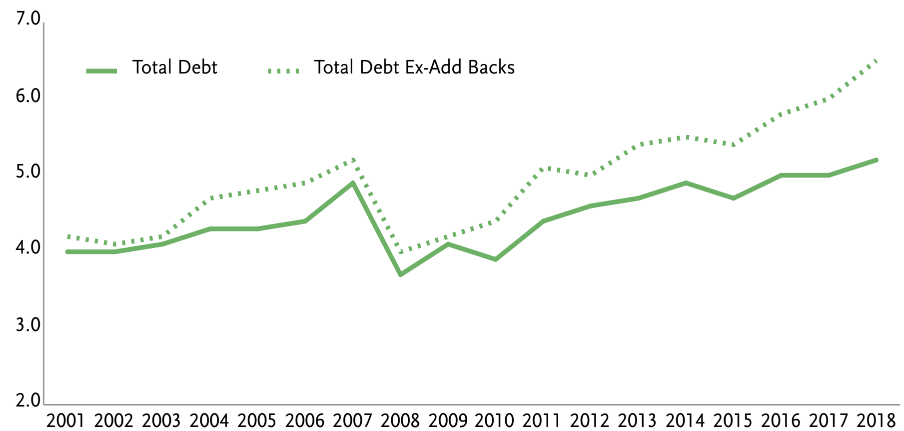
"Supposed" Synergies/EBITDA Ratio for Acquisition-Related Transactions



Source: S&P Global

EBITDA Add-Backs Optically Suppress Leverage

LOAN LEVERAGE AS MULTIPLE OF EBITDA



Source: UBS

- EBITDA is relevant to the debt investor insofar as it proxies the amount of cash flow that is available for debt service
- "Ex-ing" out recurring expenses fundamental to your operations – say marketing or administrative expenses – distorts earnings
- Even "properly" determined metrics of profitability subsume assumptions about the always unknowable future (eg., loss reserving at a bank is management's "best guess" about the future)

The Cyclops Awaken?: Risk of Rating Downgrades

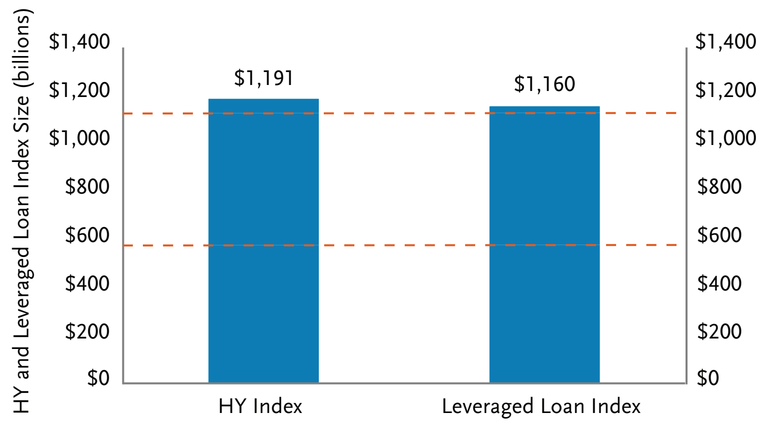
Fallen Angel Risk: Clear and Present Danger

23%-45% of BBB Downgrades Would Mean $600 Billion-$1.1 Trillion in Fallen Angels*

Statistics for Fallen Angels During Previous Credit Cycles					"Implied" Fallen Angels for this cycle* ($Bn)
Start	End	Length (Qtrs)	Net Fallen Angel Volume ($Bn)	% of BBB Index	
1Q '89	1Q '91	9	36	34%	850
1Q '00	3Q '03	15	199	45%	1,132
3Q '07	4Q '09	10	156	23%	587

Source: Morgan Stanley Research, Bloomberg, FTSE Fixed Income LLC, Moody's

HY and Leveraged Loan Index Size (Billions)



Source: BofA ML, Credit Suisse

- Historical experience has been that:
  - In the 1989-91 de-leveraging, 34% of BBBs got junked
  - In the 2000-03 experience, 45% of BBBs were junked
  - And, in the last cycle, the percentage was 23%
- A 23%-45% type of experience – were it to happen in this cycle – means that somewhere between $600 Billion and $1.1 Trillion in Fallen Angels would be created

Note: For the 2007 downgrade cycle, MS estimates net fallen angels using actual index data. For prior cycles, MS used Moody's data for fallen angels, with a haircut for index-eligible debt relative to market size. *Implied fallen angels are calculated by multiplying the proportion of fallen angels seen in previous cycles as a percentage of the BBB index times the current BBB index par.

Between Scylla and Charybdis: The Policy Makers' Dilemma

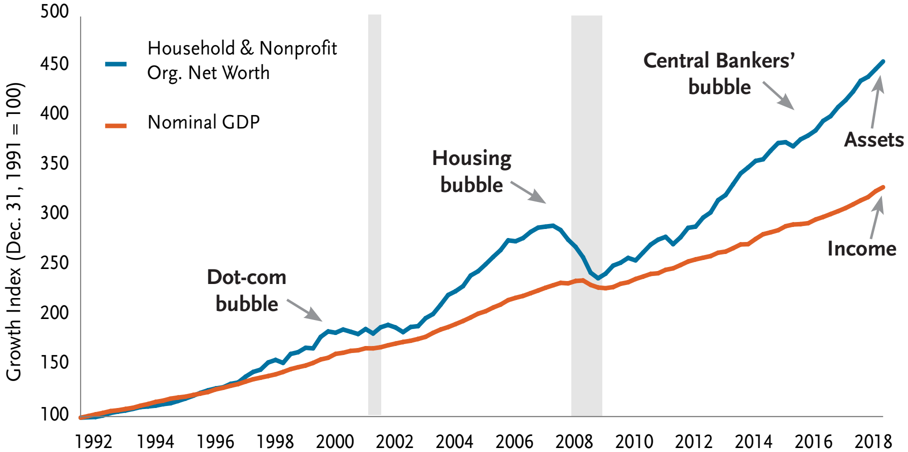
16th century Italian fresco of Odysseus' ship passing between Scylla and Charybdis.

Between Scylla and Charybdis

Cyclical Factors- Valuations, Yield Curve, Housing

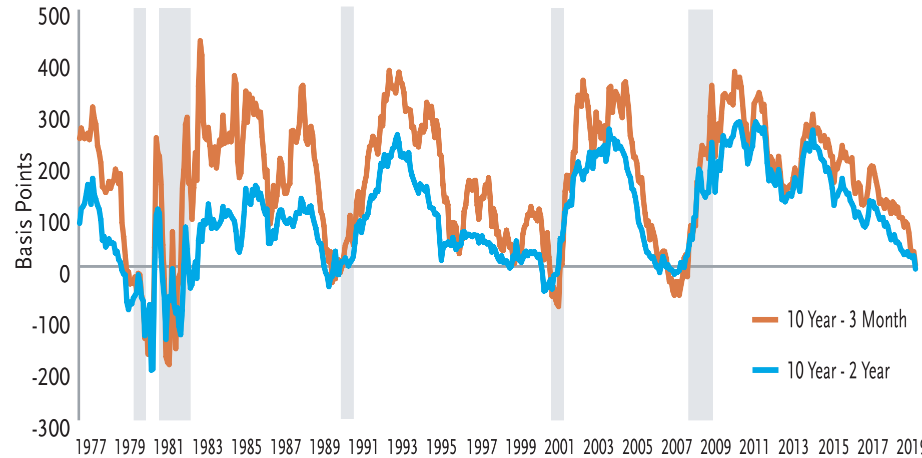
If Bankers Inflate The Asset/Credit Cycle Does It Ever Deflate?

Meaning That the Wealth Economy has Decoupled From the Income Economy (Again)



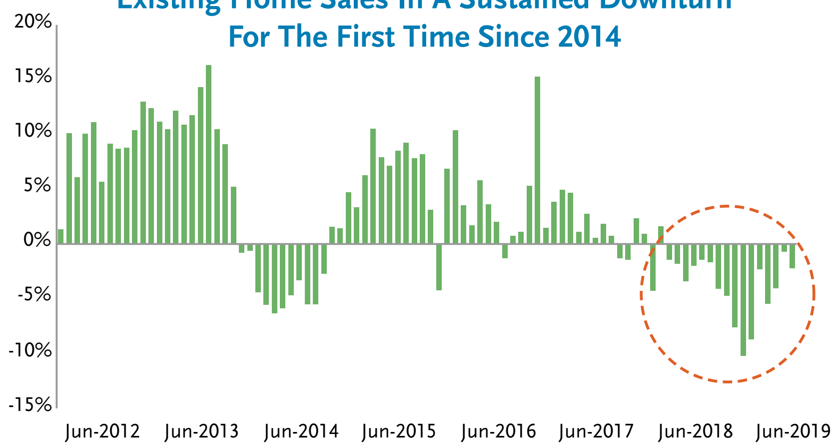
Source: Bloomberg, TCW

U.S. Treasury Yield Curve



Source: BofA ML

Existing Home Sales In A Sustained Downturn For The First Time Since 2014



Source: University of Michigan, Morgan Stanley Research

- The collective and extraordinary expansion of Central Bank balance sheets has powered the "bull market in everything"
- But rising asset prices do not "magically" lift profits or wages or indeed any of the cash flow metrics that justify/support elevated asset prices
- Flatter yield curves are synonymous with shrinkage in Net Interest Margins (NIMs)

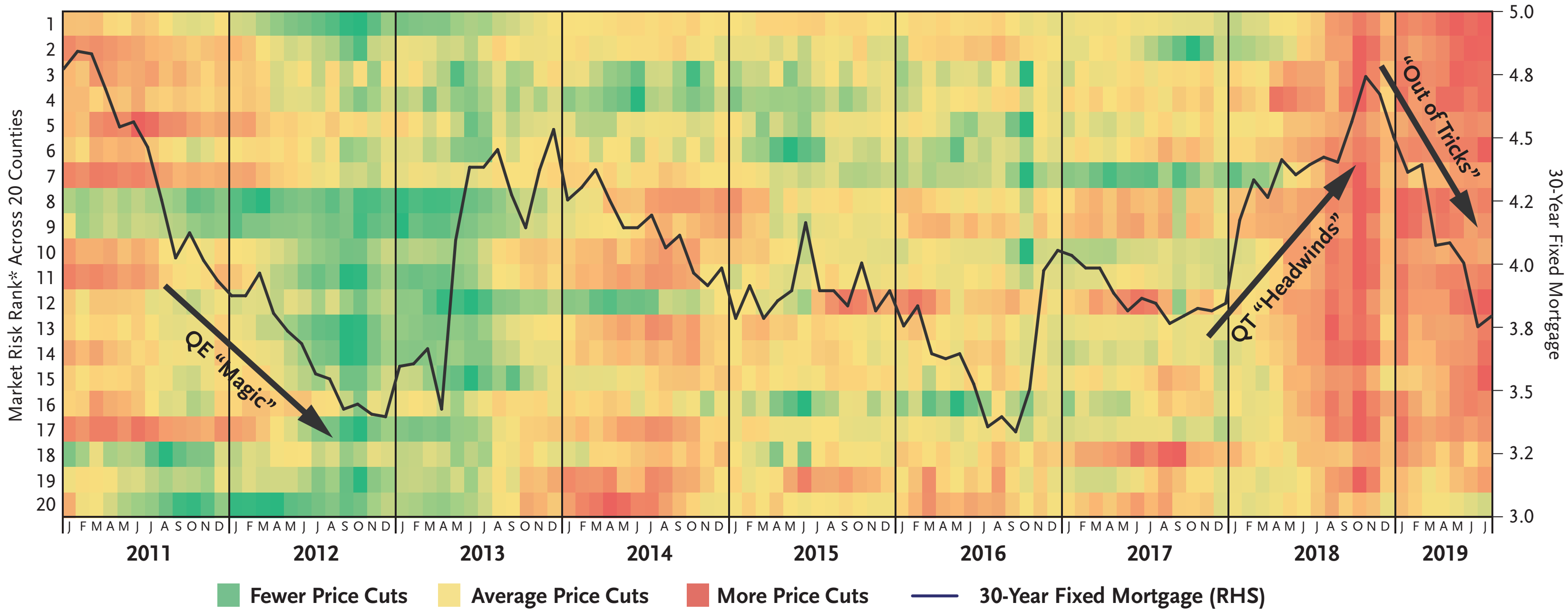
Between Scylla and Charybdis

Late Cycle Dynamics Are Causing the Housing Market to See Red

Early Cycle in Housing

Elevated Level of Mark Downs Across the 20 Largest U.S. Counties Suggests that Housing Markets May be Experiencing Late Cycle Deceleration

Late Cycle in Housing



Market Risk Rank*	County (Size Rank)	Market Risk Rank*	County (Size Rank)	Market Risk Rank*	County (Size Rank)	Market Risk Rank*	County (Size Rank)
1	Clark, NV (13)	6	Dallas, TX (9)	11	Orange, CA (6)	16	Tarrant, TX (16)
2	Santa Clara, CA (17)	7	King, WA (14)	12	Harris, TX (3)	17	Los Angeles CA (1)
3	Kings, NY (7)	8	Broward, FL (18)	13	Riverside, CA (11)	18	Bexar, TX (19)
4	New York, NY (20)	9	Miami-Dade, FL (8)	14	San Bernardino, CA (12)	19	Wayne, MI (15)
5	Queens, NY (10)	10	San Diego, CA (5)	15	Cook, IL (2)	20	Maricopa, AZ (4)

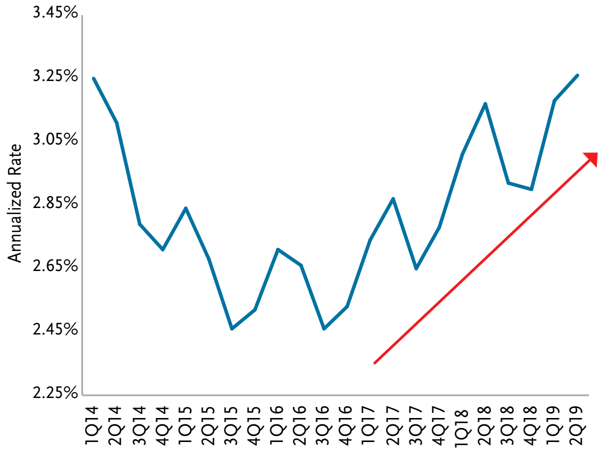
***Market Risk Rank is calculated using the magnitude of the last 6-month's average price cut percentage relative to that specific county's experience (range of percent cuts) since 9/30/2010 and then ranking to all counties by market risk.**
The highlighting is based on the deviation of the given monthly observation from 1/1/2011-7/31/2019 average, i.e., the average number is in yellow, the numbers that are higher/lower than the average are marked in various shades of red/green.
Source: TCW, Zillow, Bloomberg, Bankrate

Between Scylla and Charybdis

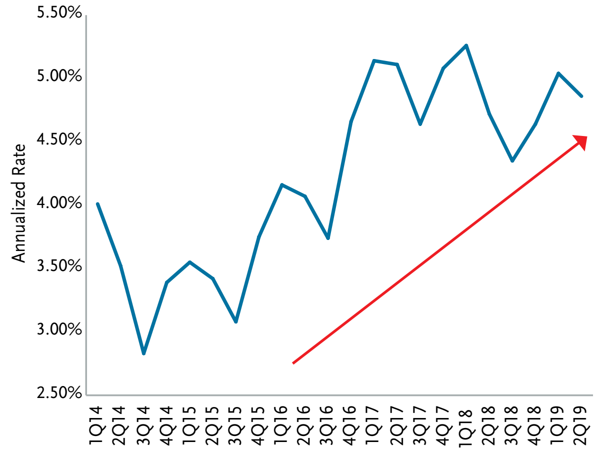
Consumer Credit Quality Is Faltering, Even with High Asset Prices, Low Rates, and Sub-4% Unemployment

Credit Card Charge-Off Rates

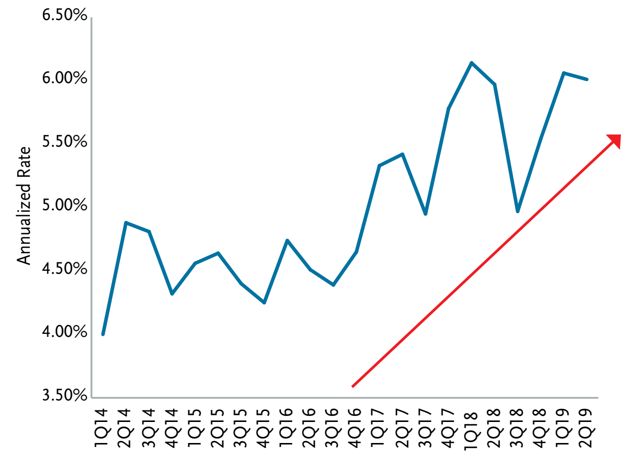
Bank of America



Capital One

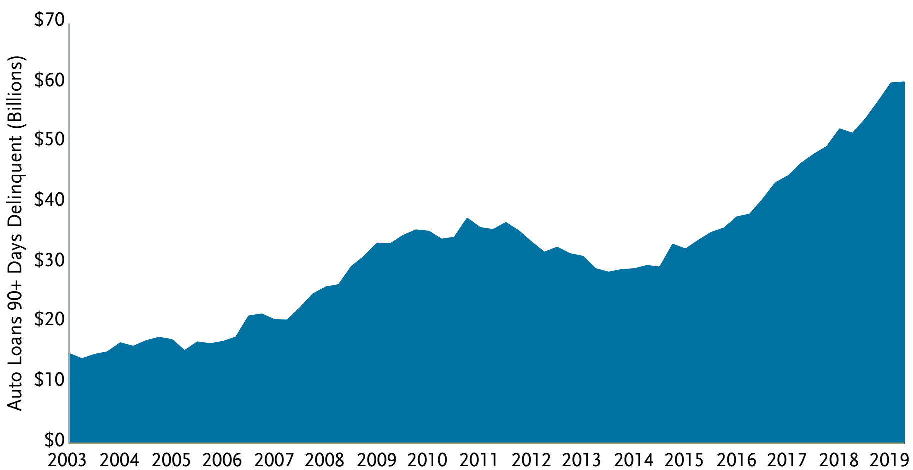


Synchrony Financial



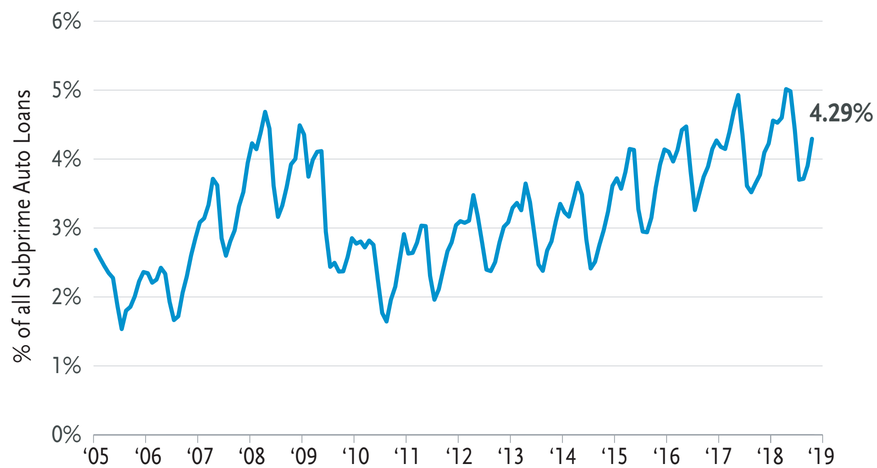
Source: Bloomberg

Auto Loans With 90+ Days Delinquency



Source: Federal Reserve

Subprime Auto Loans With 60+ Delinquencies

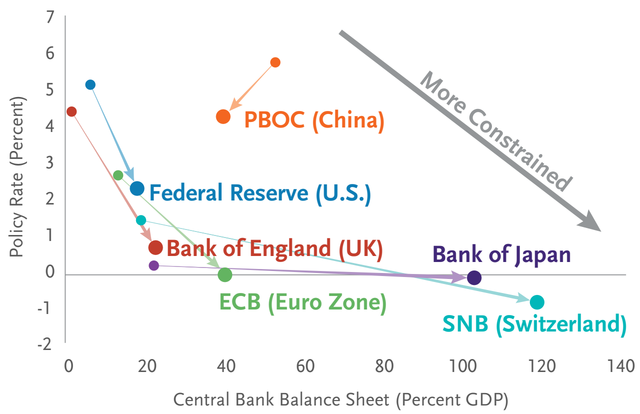


Source: Intex, Morgan Stanley Research

Between Scylla and Charybdis: Fiscal Policy?

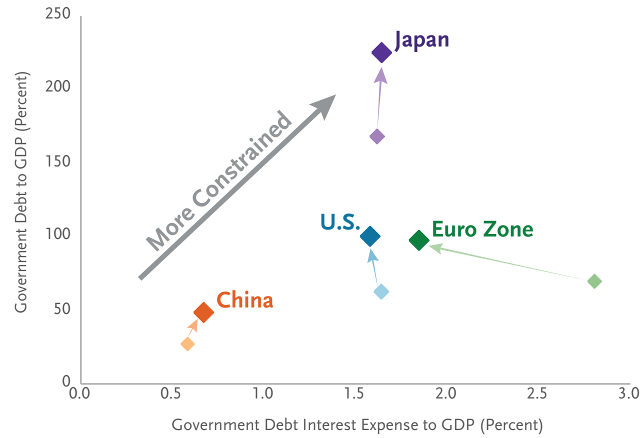
Limited Firepower, Central Banks and Governments

Dwindling Ammunition (2006-2019)



Source: Bank of England, Bank of Japan, Bloomberg, ECB, Federal Reserve, IMF, Swiss National Bank, The People's Bank of China

Debt/GDP & Interest Expense (2006-2018)



Sources: ECB, Federal Reserve, IMF, Ministry of Finance Japan, National Bureau of Statistics of China

History Shows Why We Can Stop Worrying and Just Have Faith

January 29, 2007

"One of the pleasant surprises I had coming to government has been the strong economy we have today."

– Henry Paulson

March 28, 2007

"The damage from the subprime market has been largely contained"

– Richard Fisher

March 28, 2007

"At this juncture...the impact on the broader economy and financial markets of the problems in the subprime markets seems likely to be contained."

– Ben Bernanke

October 2, 2018

"I am pleased to say...the economy looks very good...In addition, many forecasters are predicting that these favorable conditions are likely to continue...From the standpoint of our dual mandate, this is a remarkably positive outlook."

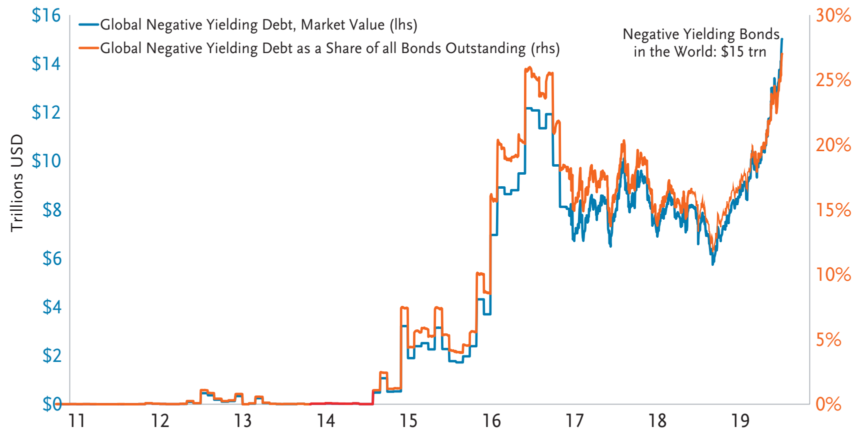
– Jerome Powell

TCW

Between Scylla and Charybdis: Monetary Policy?

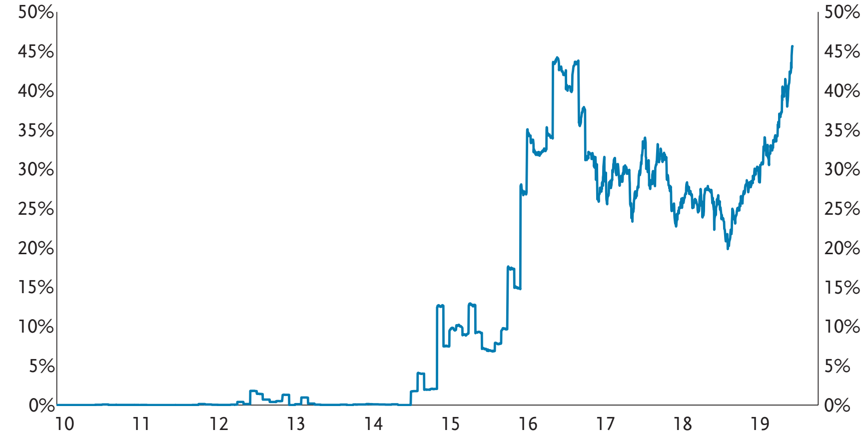
The Scope and Pervasiveness of Negative Rates Suggests Policy Exhaustion

27% of Bonds in the World Now Trade at Negative Interest Rates



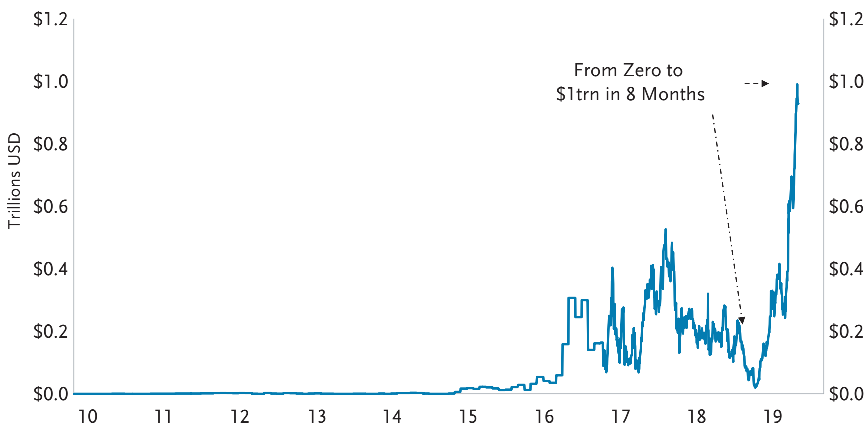
Source: Bloomberg Finance LP, DB Global Research

Negative Yielding Debt Is 45% of Global IG ex-U.S. Debt



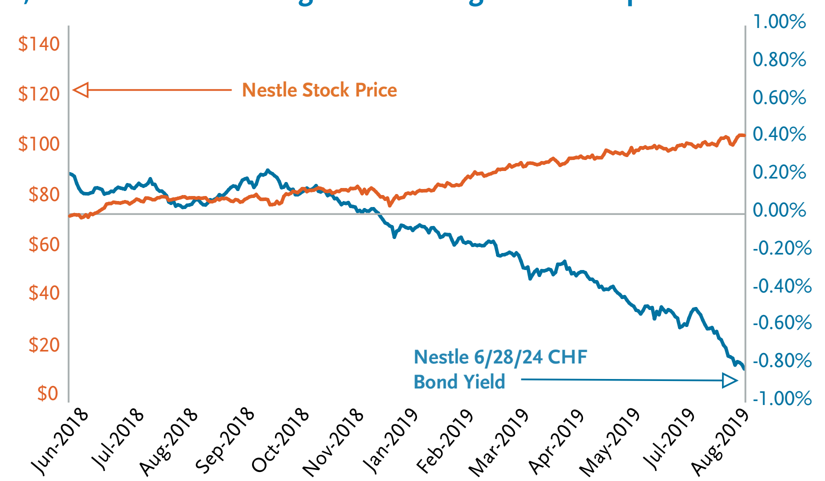
Source: Bloomberg Finance LP, DB Global Research

Global Negative Yielding Corporate Bonds...



Source: Bloomberg Finance LP, DB Global Research

So, Nestle Can Issue Negative Yielding Debt to Repurchase Shares



Source: Bloomberg

With Calypso: The Tranquil Captivity of Easy Money

Odysseus and Calypso: Red-figure vase, circa 500 B.C., Louvre Museum.

With Calypso: Free Money Does Not Solve for Slow Growth but Rather Reinforces Its Cause

Zero Rate Policy

Lowflation/ Slow Growth

Suppresses Defaults

Inefficiencies of Resource Use

Raises Asset Prices

Excesses in Investment

- Interest rates are <u>prices</u> - and prices have a job to do
- Lower prices are not “better” than higher prices - or vice-versa

With Calypso: Cheap Money and Easy Credit Do Not Foster Sustainable Growth

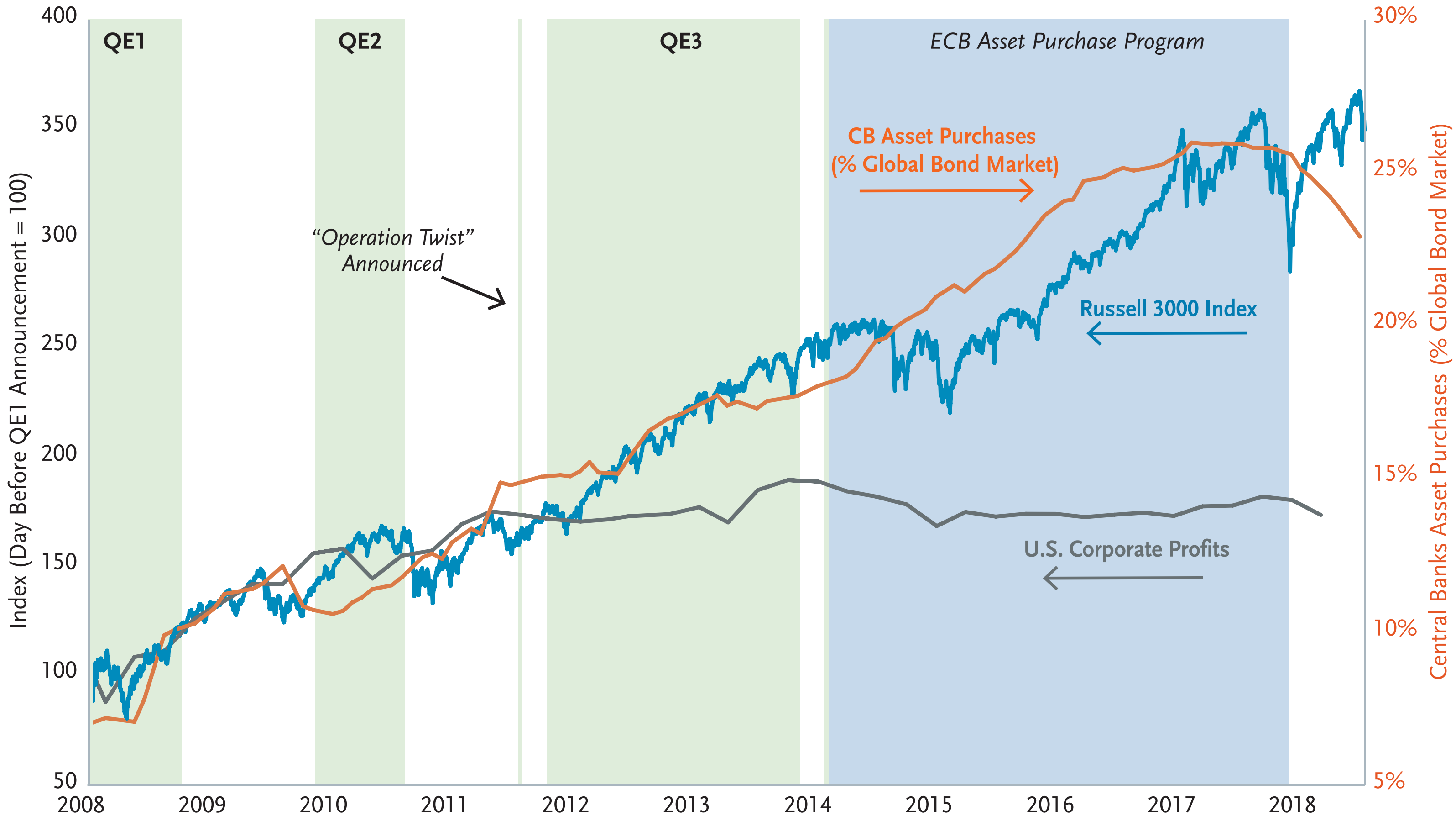
- Economic processes must be examined holistically so as to be understood
  - Actions have immediate results that are visible
  - And, actions have delayed results that are not visible
  - Investors need to understand both
- Monetary/fiscal stimulus exemplifies the “broken windows” hypothesis writ large
  - Consider the parable of the baker, the glassman, and the suit salesman
  - Breaking the baker’s window doesn’t produce anything – it redistributes from the suit man to the glassman
  - No society gets rich by intentionally destroying capital
- What are the delayed effects of the zero rate “stimulus”:
  - Zombie companies: new growth can’t happen until the dead wood is removed
  - “Reach for yield”: excesses in risk-taking
  - Artificially cheap loanable funds: credit is mispriced and so resources go to the wrong uses
  - Wealth effect: benefits the asset rich, punishes the asset poor

Zombie companies do NOT grow an economy

With Calypso: But It Sure Feels Good Today

Fed Policies Have Lifted P/E Multiples – Yet Aggregate Profits Have Stagnated

Risk Assets and Profits Since Inception of QE



Source: BEA, Bloomberg, IMF, National Central Banks, TCW

The Homecoming

1. Temptation

2. Tests

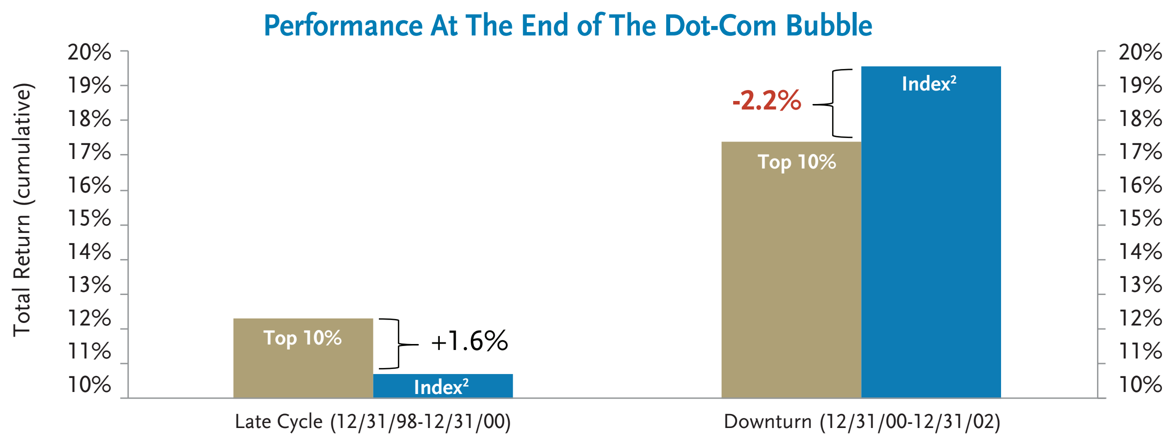
3. Revenge

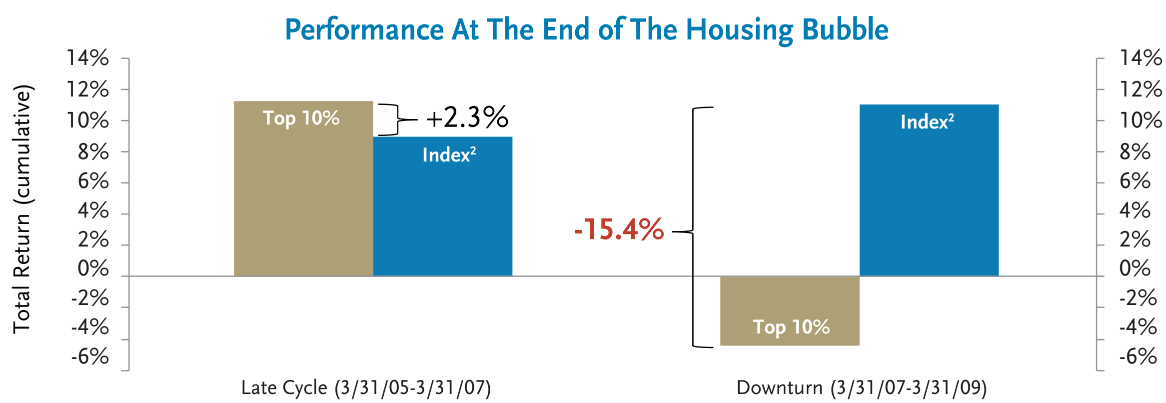
4. Revolt

The Homecoming: Avoid the Temptation

Unwinding "One-Sided" Markets is a "Pain Trade" – Be Patient

Top 10% of Morningstar Intermediate Term Bond Fund Universe[1] vs. Benchmark Index[2]





1 Based on all open ended mutual funds in the Morningstar Intermediate Term Universe as of 12/31/2000 and 3/31/2007, respectively, which had at least 4 years of track record as of 12/31/2002 and 3/31/2009, respectively and are benchmarked to Bloomberg Barclays U.S. Aggregate Index or Barclays U.S. Universal Index. Funds which have more than one share class are represented with the oldest share class. Index tracking funds are excluded from the analysis.

2 The benchmark used for the analysis is Bloomberg Barclays U.S. Aggregate Index.

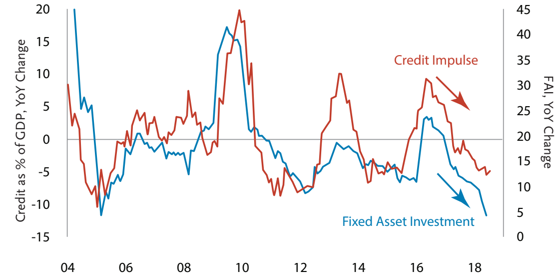
The Homecoming: Tests Ahead for Policy

Catalysts

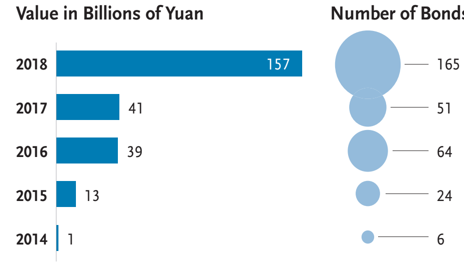
China

- Slowing growth, rising debt

China Credit Impulse and Investment



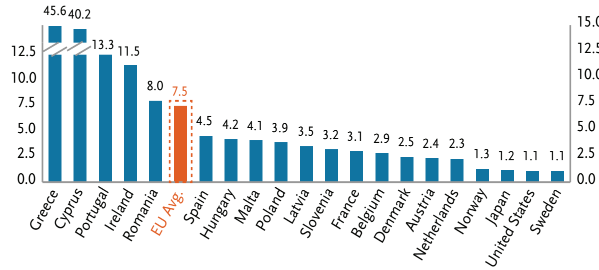
China Onshore Bond Defaults Rise



European Banking

- Moribund

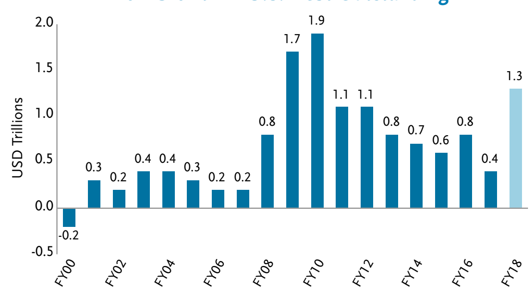
Bad Debt Ratios



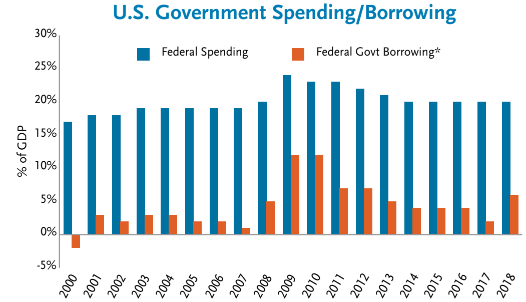
U.S. Politics/Debt Growth

- No fiscal help coming

YoY Growth in U.S. Debt Outstanding



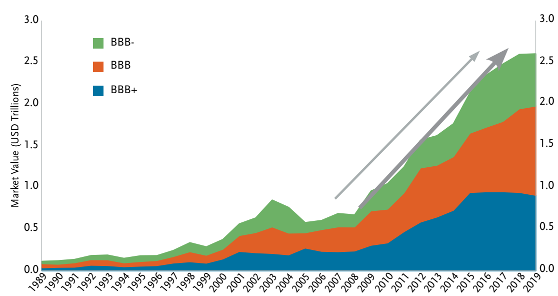
U.S. Government Spending/Borrowing



Downgrade Risk

- Massive growth in BBB

BBBs: Nearly 4x the Amount Outstanding vs. 2007



23% - 45% of BBB Downgrades Would Mean $600 Billion - $1.1 Trillion in Fallen Angels*

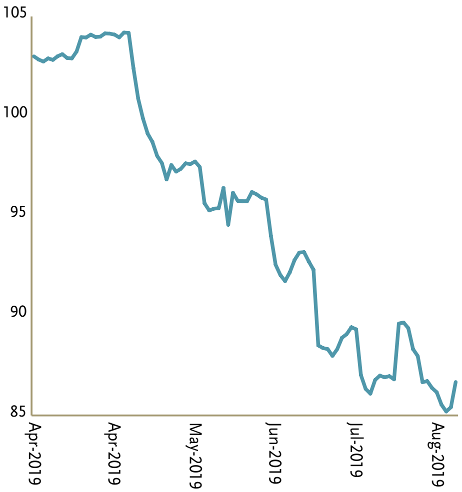
Statistics for Fallen Angels During Previous Credit Cycles					"Implied" Fallen Angels for this cycle* ($Bn)
Start	End	Length (Qtrs)	Net Fallen Angel Volume ($Bn)	% of BBB Index	
1Q '89	1Q '91	9	36	34%	850
1Q '00	3Q '03	15	199	45%	1,132
3Q '07	4Q '09	10	156	23%	587

Source: Wind, Bloomberg; Citi; World Bank; Moody's, TCW; Bloomberg, TCW; Bloomberg, TCW. *Includes debt held by the public only (i.e. excludes intragovernmental debt). Morgan Stanley Research, Bloomberg, FTSE Fixed Income LLC, Moody's

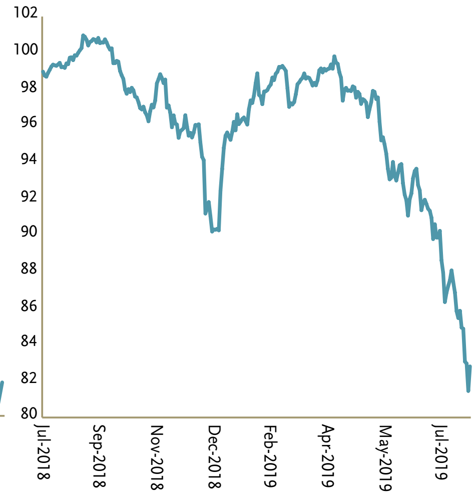
The Homecoming: Avoid the Revenge of the Slothful Credit and Liquidity Analysis

Credit Investors Increasingly Are Firing First, Asking Questions Later

**Realogy –
Competition From Discount Brokers**



**Southwestern –
Sliding Natural Gas Prices**



**Frontier –
Elevated Risk of Voluntary Filing**

**Mallinkrodt –
Opioid Litigation**

The Myth of Macro-prudential Risk Management:

- QE, NIRP, ZIRP, incentivize the build-up of leverage, higher leverage means future period liquidity requirements have risen
- Absence of traditional market-making functions suggests that when there is a rush out of higher-returning risk assets into liquid assets that:
  - The price of liquidity will rise by more than is typical (“flight to quality”)
  - The price of risk will fall by more than is typical
  - Levered investors will need to “right size” without any help from a “swing player” like Wall Street

The Barber of Seville shaves all of the men living in Seville. No man living in Seville is allowed by law to shave himself. The Barber of Seville lives in Seville.

Who shaves the Barber of Seville? And, how does a market liquify itself?

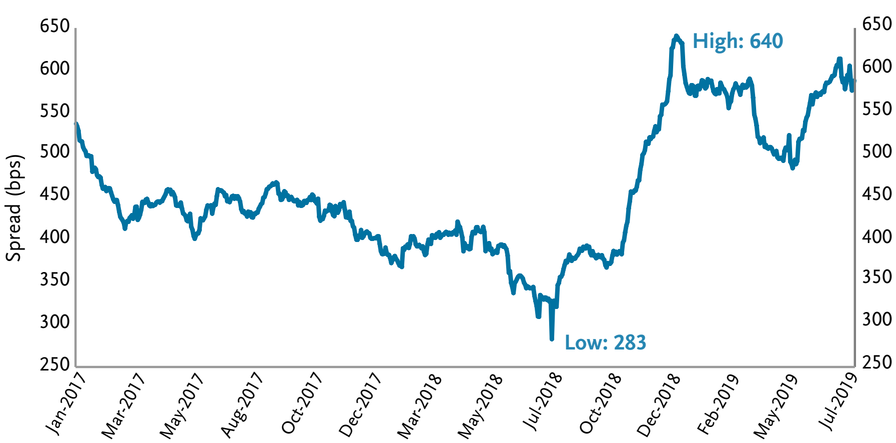
Source: Bloomberg

Note: The companies noted on this page are provided as illustrations or examples only for the limited purpose of analyzing general market or economic conditions, and may not form the basis for an investment decision.

The Homecoming Revolt: Opportunity Is Coming For Patient Investors

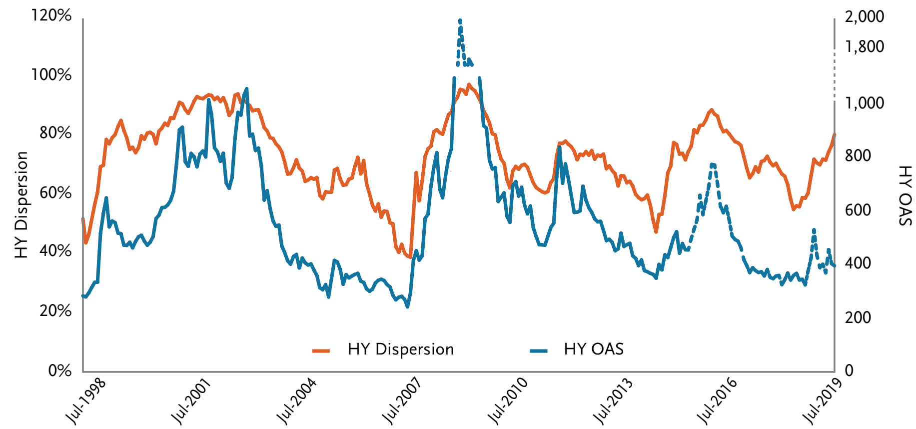
A Time to Plant, a Time to Reap...Active Opportunities Return

HY Decompression: CCC Spreads – BB Spreads



Source: Bloomberg

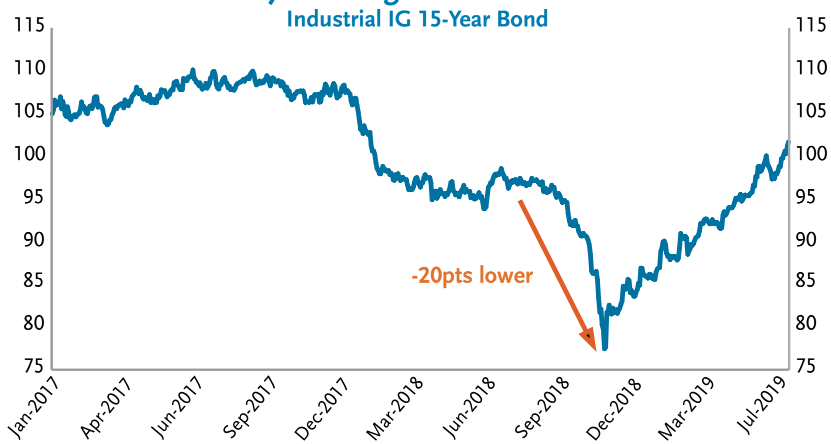
% of High Yield Market w/ Spread +/- 100bps of the Average



Sources: Morgan Stanley Research, Bloomberg

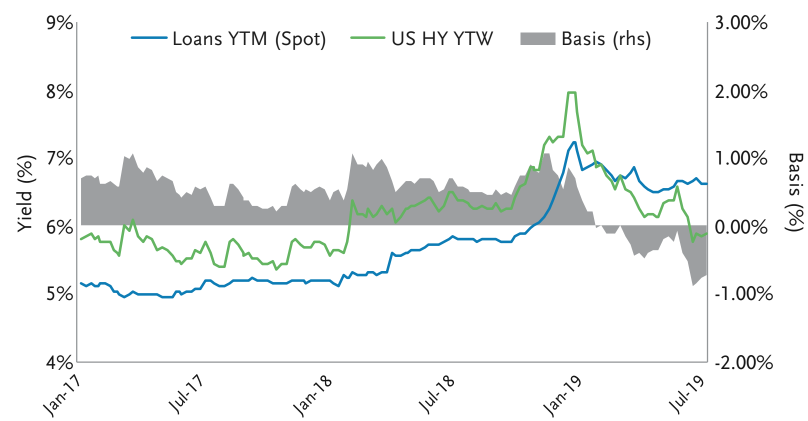
It's Not Just a High Yield Phenomenon

Industrial IG 15-Year Bond



Source: Bloomberg

Leveraged Loans vs. High Yield Bonds



Source: Bloomberg; As of July 2019

The Homecoming: Pass the Test, Avoid the Revenge, Buy the Revolt

Key Portfolio Construction Objectives

1. Maintain a Defensive Credit Positioning

- Underweight corporate credit on a spread-duration basis (but add on weakness) and minimize exposure to vulnerable (breakable) issuers and sectors

2. Don't "Bleed out" Performance

- Substitute "bendable," "safe spread" assets for risky corporate credits (e.g., Agency MBS, Senior Asset-backed securities (ABS), Non-Agency Residential MBS)

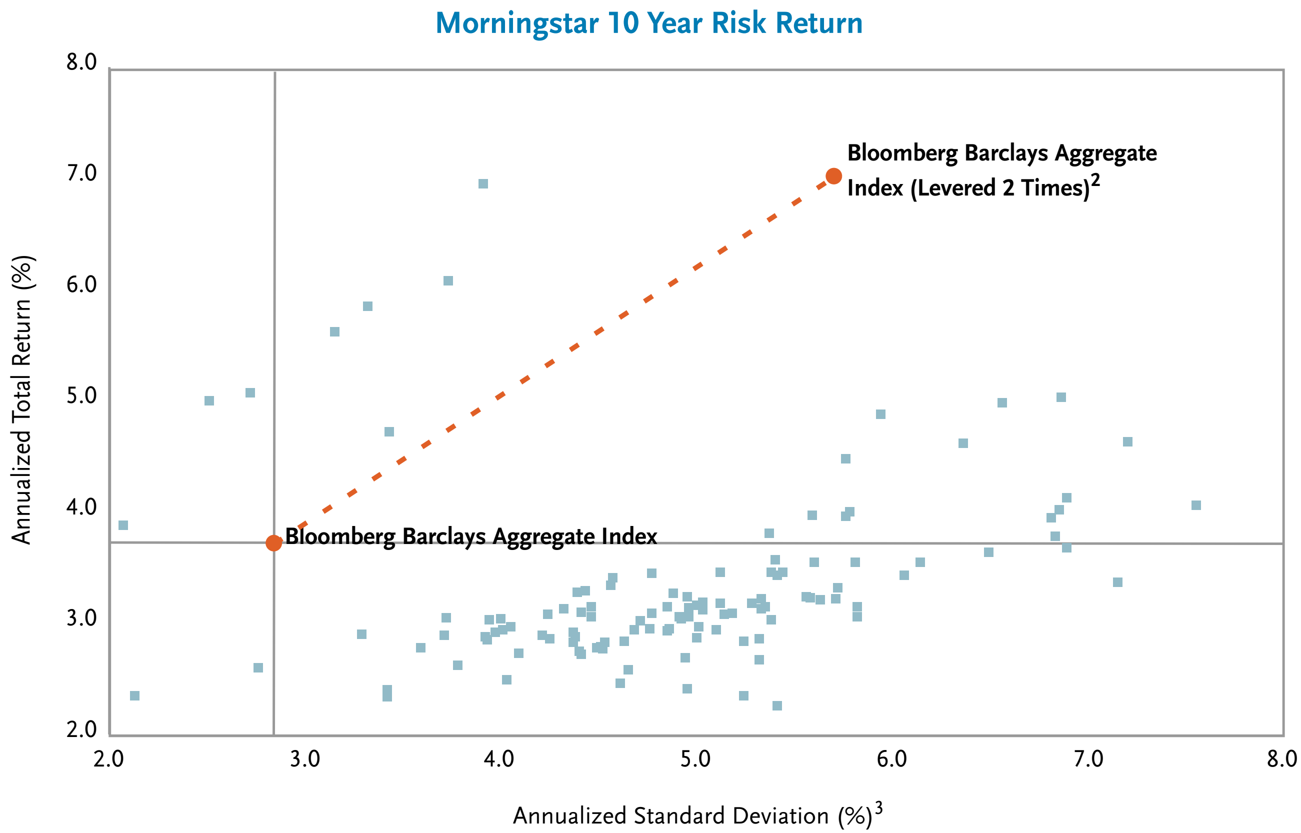
3. Neutral Interest Rate Duration Relative to the Benchmark

- Market has gone from expecting 3 hikes as of Q4 2018 to currently expecting 4 cuts in the next twelve months
- As rates rallied, we gradually reduced our 0.2 yrs duration overweight to a mild underweight (0.3 yrs total reduction from January 2019 through August 2019)

4. Keep Your Liquidity (and your head)

- As markets transition, use current liquidity to take advantage of dislocations

The Homecoming: Avoiding the Deleveraging Sets Managers Up for True Risk-Adjusted Alpha



1 As of April 30, 2019 based on 117 mutual funds in the Morningstar Intermediate Core-Plus Bond Universe that had a 10 year track record as of April 30, 2019. Funds that have multiple share classes are represented by the oldest share class. Morningstar Intermediate Core-Plus Bond Universe includes portfolios that invest primarily in investment-grade U.S. fixed-income issues including government, corporate, and securitized debt, but generally have greater flexibility than core offerings and hold non-core sectors such as corporate high yield, bank loan, emerging-markets debt, and non-U.S. currency exposures. Their durations (a measure of interest-rate sensitivity) typically range between 75% and 125% of the three-year average of the effective duration of the Morningstar Core Bond Index.

2 Reflects the annualized return and standard deviation that an investor would realize by borrowing an amount equivalent to her portfolio at U.S. T-Bills rate and investing the entirety of her portfolio and the borrowed funds in Bloomberg Barclays Aggregate Index.

3 A measure of the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Standard deviation is calculated as the square root of variance.

Past performance is no guarantee of future results.

Consistent Philosophy for Calm and Rough Waters

Dionysos on a boat: Attic Black-figure Kylix attributed to the painter, Exekias, circa 530 B.C.

Calm and Rough Waters:

Active Management, (In)complete Information, Behavioral Bias and Mean Reversion

I. Inefficiency exists when information is incomplete or repeatable bias/market distortions or anomalies exist

ALPHA SOURCE:	SYSTEMIC RISK (Top Down)	IDIOSYNCRATIC RISK (Bottom Up)
	– Complete information – Herding bias – Policy Bias	– Incomplete information – Market segmentation – Herding bias – Liquidity impacts
Conclusion:	– Exploitable long term anomaly – Mean reversion driven by behavioral reactions and policy-makers	– Ideal for alpha generation – Conflation of risk with price volatility makes long term valuation based approach effective through the cycle
Strategy:	– Reduce systemic exposure at high prices – Cost average into risk as price falls and expected return rises	– Cost average into sectors and issues displaying largest inefficiencies when fundamentals are strong or improving
Result:	– Risk is reduced when alpha opportunities are low and mean reversion is high	– Highly diversified portfolio with many alpha sources

- **As history has shown, modern risk management fails spectacularly at credit cycle inflections. Behavioral bias magnifies these failures. Having a cyclically (price) aware philosophy protects against excessive risk during inflections and encourages risk taking when long-term expected returns are high.**

TCW

Biography

Laird R. Landmann
Group Managing Director
Co-Director Fixed Income
Fixed Income

Mr. Landmann is a Generalist Portfolio Manager in the Fixed Income Group. He joined TCW in 2009 during the acquisition of Metropolitan West Asset Management LLC (MetWest). Mr. Landmann currently serves on the boards of the TCW and Metropolitan West Mutual Funds. Mr. Landmann currently co-manages many of TCW and MetWest's mutual funds, including the MetWest Total Return Bond Fund, the MetWest High Yield Bond Fund and the TCW Core Fixed Income Fund, and leads the fixed income group's risk management efforts. He is a leader of the MetWest investment team that was recognized as Morningstar's Fixed Income Manager of the Year for 2005 and has been nominated for the award eight times. Prior to founding MetWest in 1996, Mr. Landmann was a principal and the co-director of fixed income at Hotchkis and Wiley. He also served as a portfolio manager and vice president at PIMCO. Mr. Landmann holds an AB in Economics from Dartmouth College and an MBA from the University of Chicago Booth School of Business.

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