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THE CHALLENGE POSED BY EUROPE'S ZOMBIE MEGABANKS: THE IMPOSSIBILITY OF REGULARIZING THE UNSPOKEN AND JERRY-RIGGED ARRANGEMENTS KEEPING THEM IN PLAY

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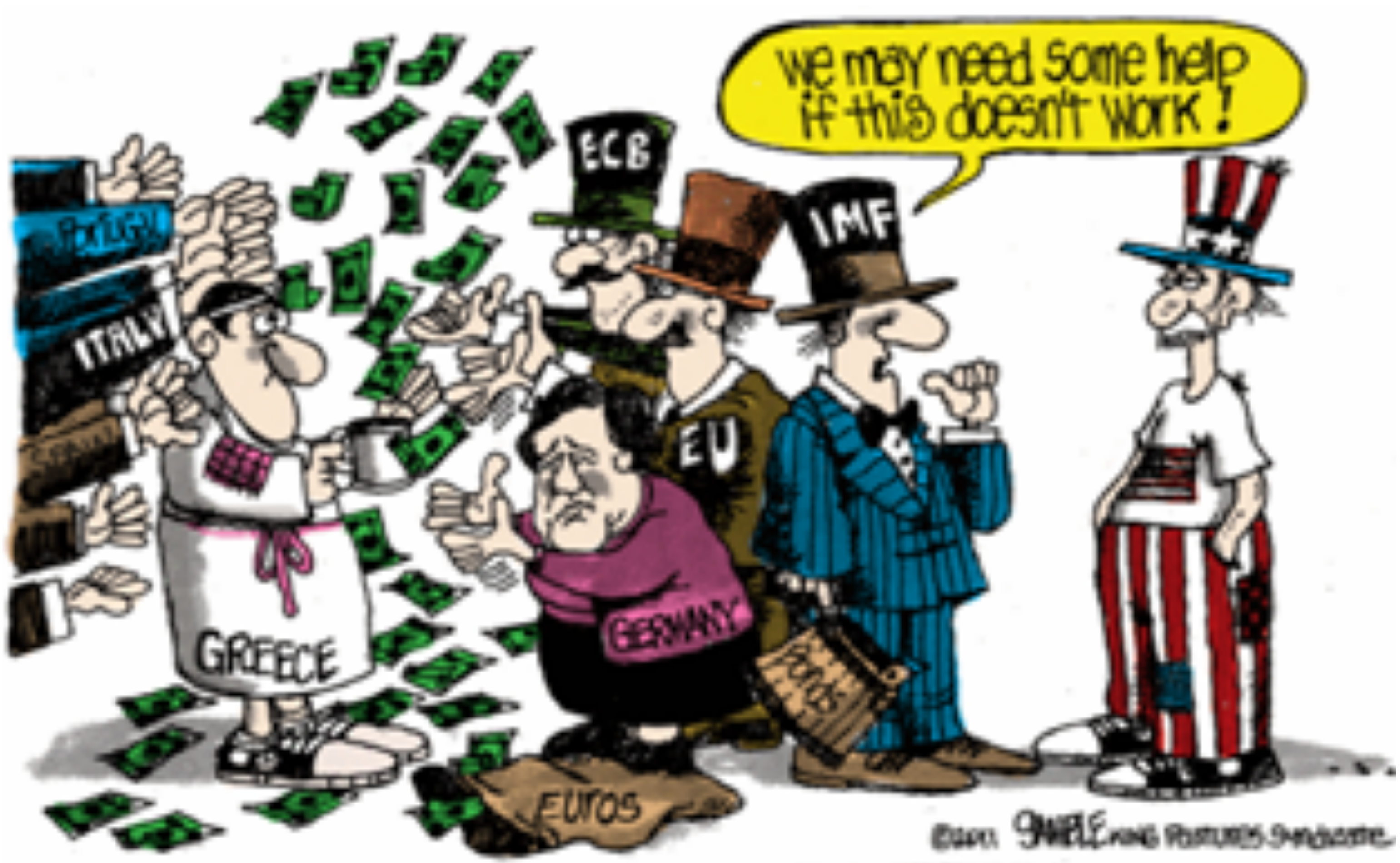
MY CONCEPTION OF WHAT EU MEGABANK RESCUE ARRANGEMENTS TRULY LOOK LIKE



MEGABANKERS DICTATE RESOLUTION POLICY

Around the world, megabankers have learned that capturing regulators allows them to hold the macroeconomy hostage to extract subsidies from taxpayers. These bankers cosmetically misrepresent their economic condition and pursue profit-making opportunities that exploit counterparties' and regulators' informational disadvantage. The Fed's demonstrated propensity for rescuing foreign banks makes US taxpayers serve as the world's *de facto* guarantors of last resort.

Given continuing Fed post-crisis support (which includes **currency swaps** and **interest on foreign-bank deposits** at the Fed), individual-country regulators can afford to give distressed institutions the benefit of the doubt and expand their own safety nets. Rather than trying to benchmark and resolve their own particular insolvencies, firming up implicit safety-net guarantees and minimizing creditor haircuts seems the politically safer path to follow.

Limited Usefulness of US and EU Package of Country and EU-level Financial Reforms

(Ought to Carry this Warning: Will Not Adhere to Megabanks)

BAND-AID ARRANGEMENTS FOR SUPERVISION DEFINITELY "TALK THE TALK"

1. Stiffer accounting standards for bad loans
2. Refocused Bank Exams
3. New Macro-prudential stress-testing framework focused not only on banks, but on at least a few other large financial organizations.

   Authorities claim to be watching explicitly for:

   a) Potential contagion ("domino effects")
   b) Two-way feedback from and to the real economy
   c) Weakness in liquidity in networks of funding arrangements
   d) Multiple weaknesses in megabank solvency
   e) Breakdowns in acknowledging or managing nonperforming loans

(But proposals to lessen the frequency and rigor of stress tests and to provide a "leverage off-ramp" are gaining traction.)

BAND-AID ARRANGEMENTS FOR PROTECTING TAXPAYERS IN CRISES AND INSOLVENCY RESOLUTIONS SOUND GOOD, TOO

1. **Loophole-Ridden Mandatory Bail-In Framework for EU countries**
2. Restrictions on the Fed's ability to lend selectively to *individual* distressed institutions.
3. Expanded Deposit Insurance Coverage and Reserves
4. Living Wills and enhanced resolution authority
5. EU and Fed assurances of supervision and liquidity support for central counterparties (i.e., securities and swaps exchanges)
6. **Coco Bonds: von Furstenberg estimates $460B issued worldwide (my guess is 60% in Europe) between 2009 and yearend 2016.**
7. Fed cross-border currency swaps that informally back up foreign banks and central banks

PROBLEM IS THAT, NO MATTER HOW MUCH SUPERVISORY AND RESOLUTION AUTHORITY EXPANDS, THE UNSPOKEN NORMS (*LES NON-DITS*) THAT GOVERN THE EXERCISE OF THIS AUTHORITY REMAIN MUCH THE SAME

1. Central-bank commitment to protecting and expanding agency and clientele turf
2. Industry-Centered norms of client service, protection, and partial acceptance of blame when crises occur.
3. Loss-concealment norms (e.g., efforts to understate their tolerance of nonperforming loans)
4. Mercy and benefit-of-the-doubt norms that delay resolution of insolvency
5. Norms of individual career management
    a. Blame-avoidance norms (rocking the boat or challenging higher-ups is seen as career suicide)
    b. An understanding that is ok to nurture one's post-government employment and speaking opportunities.

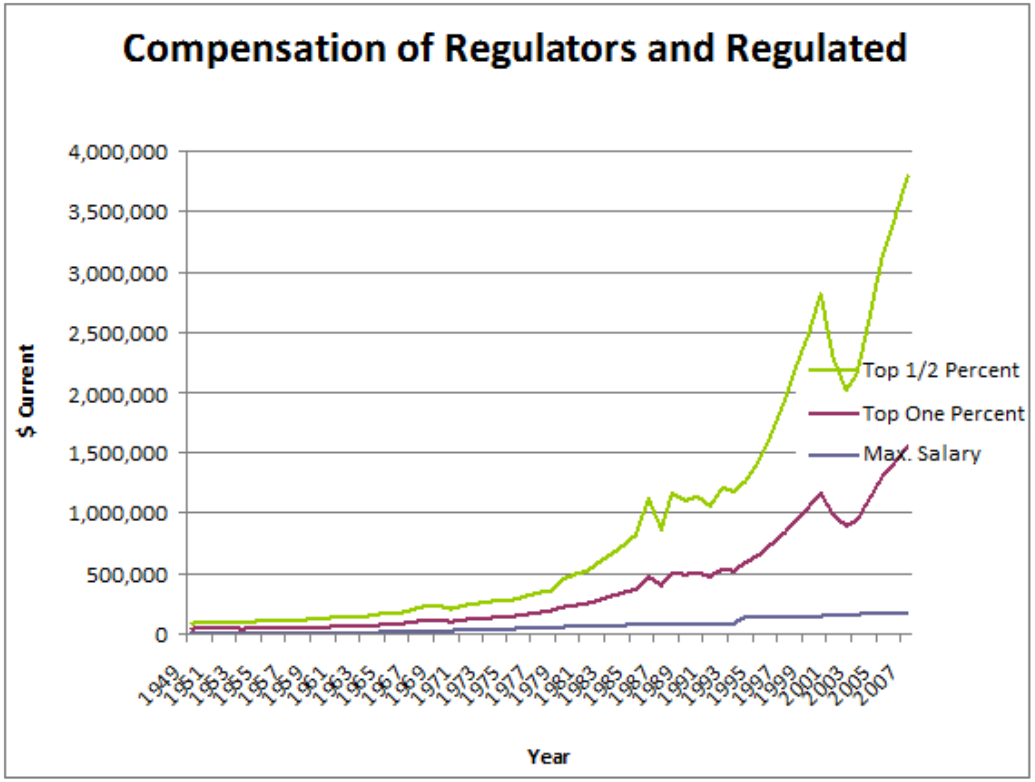
After leaving public office, Senior Fed and Treasury officials have made considerable use of both earning opportunities imbedded in Norm 5b.

According to the NYT, Alan Greenspan was hired to consult for the hedge fund Paulson & Company, Deutsche Bank, and the bond investment firm Pacific Investment Management Compan.

Timothy F. Geithner joined the private equity firm Warburg Pincus.

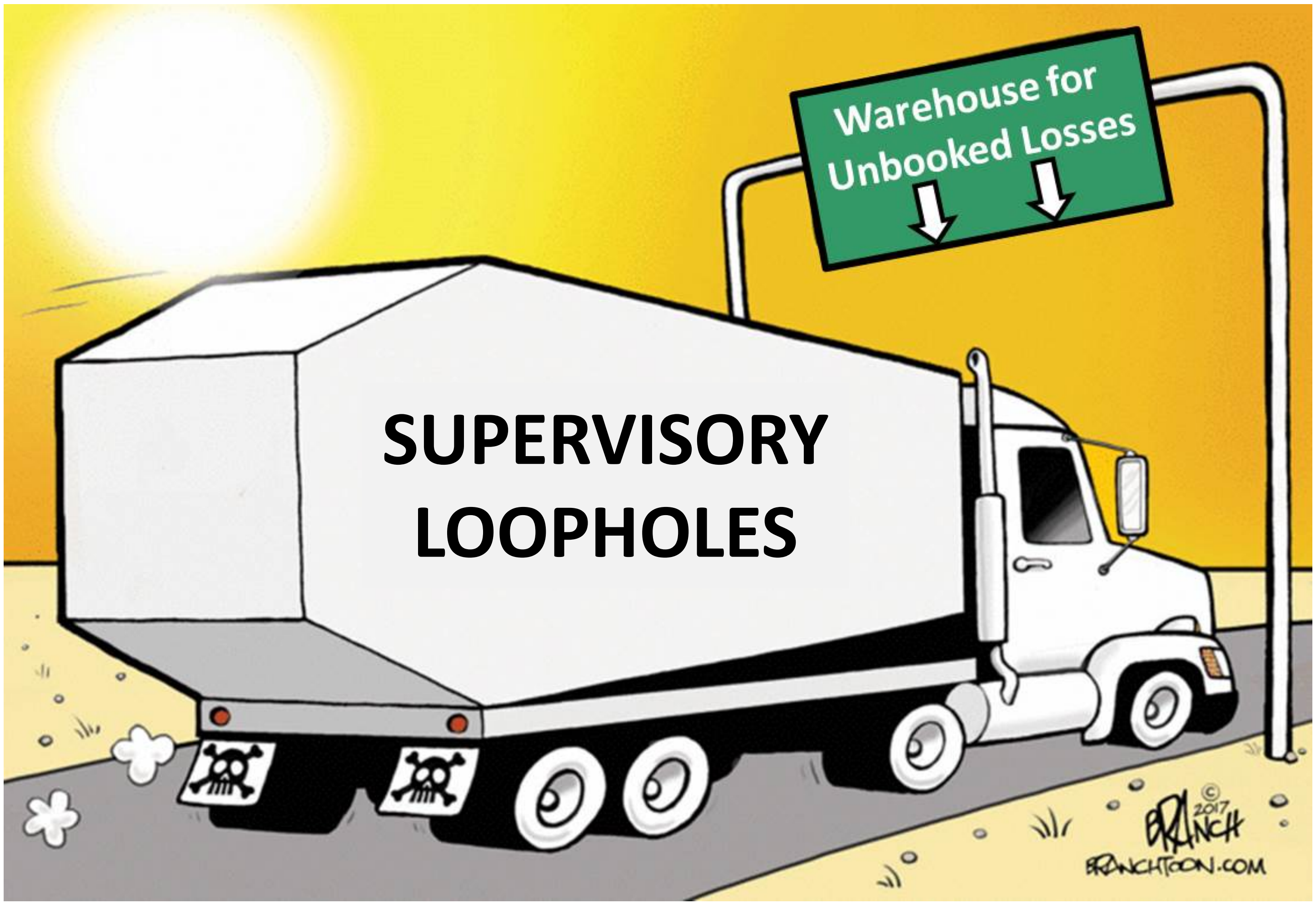
And Ben Bernanke is now associated with Brookings and maintains a busy post-government speaking schedule. Besides a profitable week of enlightening foreign audiences in March, Mr. Bernanke made several other appearances in the Spring, including at a private equity conference hosted by the Blackstone Group In the fall, he is scheduled to speak at the SALT hedge fund conference in Singapore. Morgan Stanley was reportedly (according to the NYT again) negotiating to have him speak at a dinner on the sidelines of the conference.

Why the Revolving Door Does So Much Business: Salaries of Top Regulators Compared with Incomes Earned by Top Managers in the Private Sector Over Time



Source: Ferguson and Johnson, "When Wolves Cry Wolf,'"
INET Paper, King's College, Cambridge University, 2010
https://www.ineteconomics.org/uploads/papers/INET-C@K-Paper-Session-8-Ferguson-Rob-Johnson.pdf

WHEN NET WORTH IS GREATLY OVERSTATED, EARNINGS MUST LOOK WEAK



THESE NORMS LEAD TO WHAT I CALL THE CULTURE-DRIVEN MEGABANK-BAILOUT HYPOTHESIS. THIS MODEL IS ROOTED IN: (1) TOP-MANAGER INCENTIVES TO PURSUE TAILS RISKS AT MEGABANKS; (2) THE DURABILITY OF CONCEALMENT AND BENEFIT-OF-THE-DOUBT NORMS AT REGULATORS AND CENTRAL BANKS; AND (3) THE HIGH CORRELATION OF STAND-ALONE DEFAULT PROBABILITIES ACROSS MAJOR BANKS IN US AND EU

Bank Pair	Correlation Coefficient in KRIS data
BAC and C	.94
BAC and JPM	.80
BAC and GS	.93
BAC and MS	.94
BAC and DBK	.51
BAC and BBVA	.73
BAC and UBS	.60
BAC and CSGN	.71

KRIS posted these figures on 3-17-17. These high correlations destroy the credibility of strict bail-in promises. They tell us that, when one of these banks is in Distress, the others are more apt to need help than to be able to assist them.

COUNTRIES ARE TRYING TO REWORK THEIR SAFETY NET TO LESSEN THE ATTRACTIVENESS OF RECKLESS RISK-TAKING

But reforms focus on corporate-level rather than manager-level behavior. It is critical to set up enforceable standards for individual megabanker and regulator duties to taxpayers of loyalty, competence and care that identify reckless banking behavior and punish its occurrence.

- The first step in making this happen is for legal systems of corporate governance to recognize that the profit-maximization norm gives taxpayers an unfairly structured residual "equity" stake in a country's megabanks.
- The second step is to recognize "reckless banking" as a crime and set up a ladder of punishments for **individual bankers** that abuse taxpayers' stake.

In this slide, we study the 11 weakest banks operating in the United States (regardless of headquarters location) that were subject to the Federal Reserve's CCAR stress testing in 2016. Banks are ranked in this table by the size of their three-year cumulative default probabilities on 3-9-17 :

Ticker	Company	Country	S&P Rating	1 yr	3 yr	10 yr
DBK	DEUTSCHE BANK AG	DEU	BBB+	2.06	6.49	22.90
SAN	BANCO SANTANDER SA	ESP	A-	0.86	4.11	20.83
BBVA	BBVA	ESP	BBB+	1.01	4.05	19.75
8306	MITSUBISHI UFJ FINANCIAL GRP	JPN	A	0.49	3.43	19.79
ALLY	ALLY FINANCIAL INC	USA	BB+	0.63	3.17	19.35
601988	BANK OF CHINA LTD	CHN	A	0.82	2.83	15.28
HSBA	HSBC HLDGS PLC	GBR	A	0.22	2.34	17.69
RF	REGIONS FINANCIAL CORP	USA	BBB	0.14	1.71	14.61
HBAN	HUNTINGTON BANCSHARES	USA	BBB	0.14	1.63	14.13
TPB	BNP PARIBAS	FRA	A	0.11	1.57	15.27

The model of default probability used to generate the probabilities is Kamakura Risk Information Services version 6.0 Jarrow-Chava reduced form default probability model (abbreviated on the KRIS site as KDP-jc6)

- This model was developed for Don van Deventer. Don has generously made these data available to me.
- The model uses a sophisticated combination of financial ratios, stock price history, and macro-economic factors.

  The version 6.0 model was estimated over the period from 1990 to 2014, and includes the insights of the recent credit crisis. Kamakura default probabilities are based on 2.2 million observations and more than 2,700 defaults.

  A term structure of default over different horizons is constructed by using a related series of econometric relationships estimated on this data base. KRIS covers 35,000 firms in 61 countries, updated daily.

THE KRIS MODEL OF DEFAULT PROBABILITIES INDICATES THAT UNACKNOWLEDGED IMPLICIT GUARANTEES IN EUROPE ARE HOLDING BACK A TIDAL WAVE OF INSOLVENCY

- Nonstandard **behavior of credit spreads** on "unguaranteed" megabank bonds backs up my policy skepticism. Yields on debt securities of distressed megabanks act **as if estimated surges in their default probabilities are largely irrelevant**.
- This claim can be translated into a testable hypothesis about how much slope parameters in a diff-on-diff model surge at megabanks during a crisis. The model I have in mind takes surges in default probability as **exogenous** and surges in credit spreads as **endogenous**.

How a Firm's Credit Spread Moves in Distress Depends on How Fully Its Creditors **Feel** They are Covered by the Safety Net

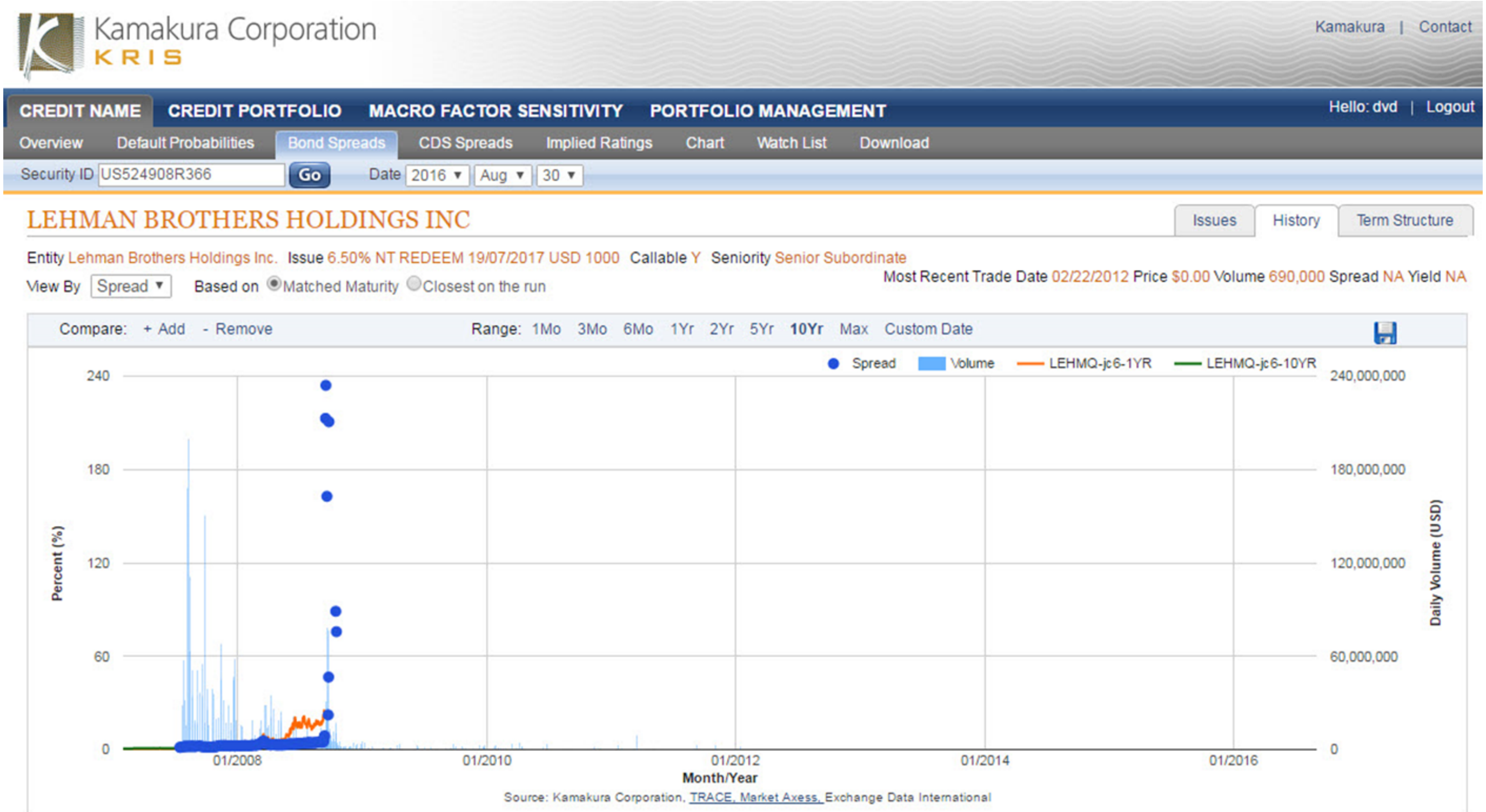
- The next few slides will use graphs to illustrate default-swap or credit-spread behavior in and out of crisis for: GE (as a baseline) and several US and European megabanks.
- Blue dots: **Credit spread**, based on actual trades and calculated using matched-maturity Treasury (different from the convention which uses the nearest **shorter** US Treasury on-the-run yield)
- Light Blue lines show **volume** of trading in the selected bond
- Orange line: **1 year** Kamakura Risk Information Services reduced-form default probability (KDP), version 6.0
- Green line: **10 year** (unless otherwise noted) KRIS reduced form default probability, version 6.0

- Finance is only a small part of GE operations.
- Blue dots move sharply with surges in orange line and stay high even after 1 year KDP bottoms out slowly as problems are worked out.
- Problems slowly resolved. Matures 12-6-17.

citigroup

- Matures 8-17.

- Matures 12-1-17.



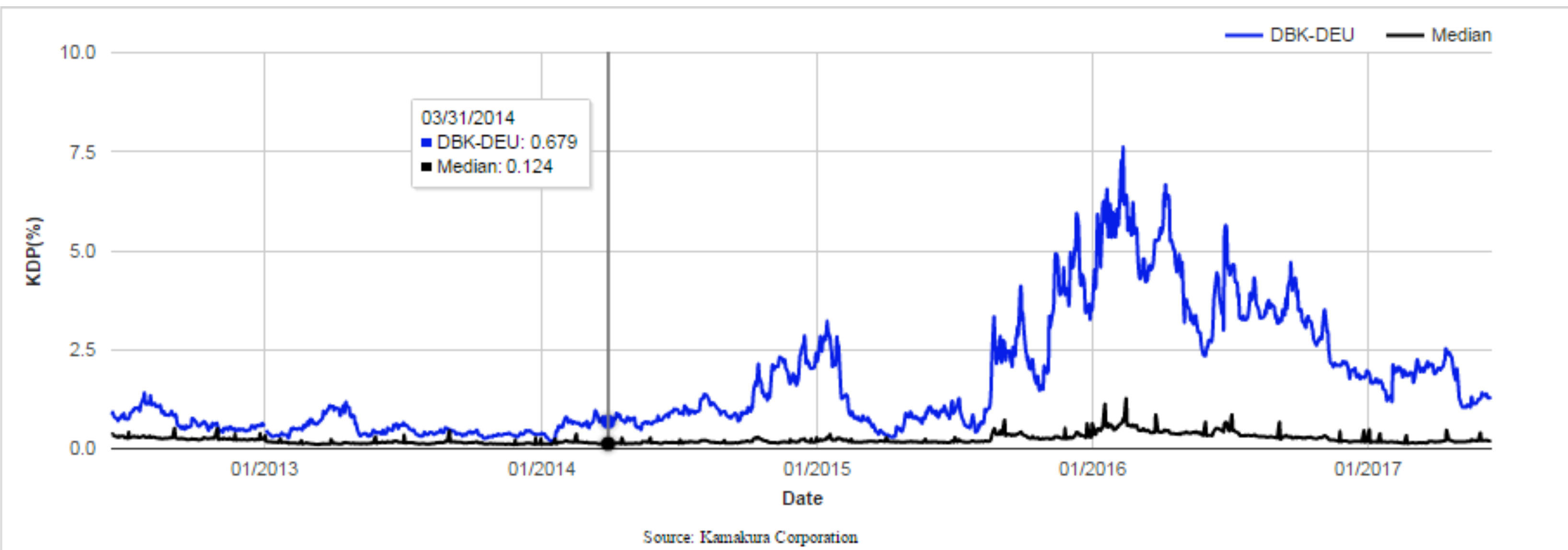
Evidence that expectations of federal rescue existed and were let down.
Debt price crashed. We see this for Banco Popular as well during its last week.

Using US crisis experience as a touchstone, I will summarize evidence that indicates that several major European Megabanks were also TBTF during the Great Financial Crisis.

Most of the largest banks in Europe showed this pattern. Some failed, others merely limped along during the aftermath, and appear to be moving toward becoming as fragile as they were during the GFC.

- Surge in Orange preceded GFC. Credit spread moved much less than surges in other lines. Evidence of TBTF, but some uncertainty.
- Bond studied here matures 9-1-17.

COMPARISON OF ONE-YEAR “KDP” AT DBK WITH MEDIAN KDP OF US BANKS, mid-JUNE 2012 THROUGH mid-JUNE 2017.



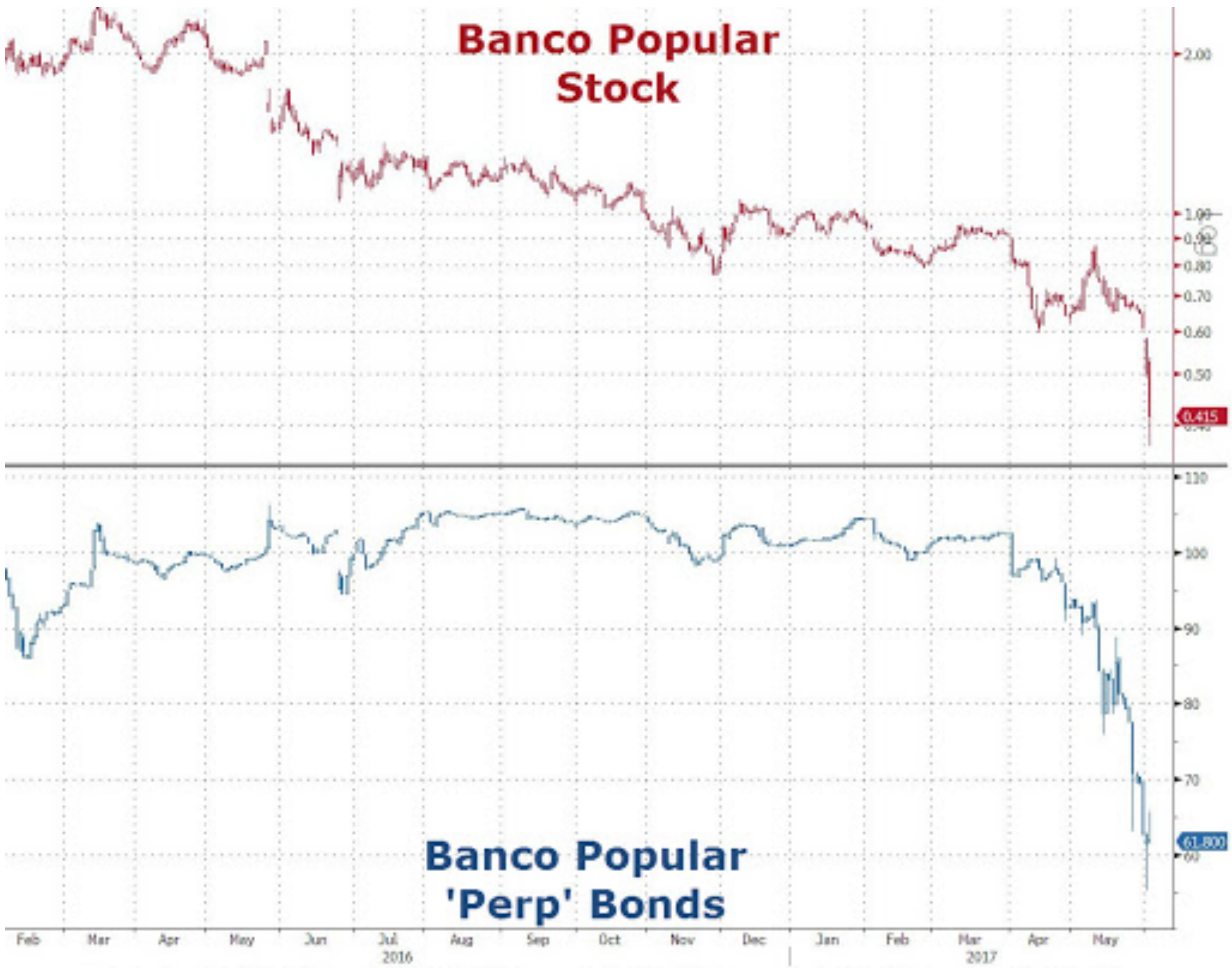
TWO RECENT TESTS: DIFFERENTIAL TREATMENT OF DISTRESS AT DBK AND AT SANTANDER AND BANCO POPULAR (BPM)

I will present evidence that:

1. Major DBK creditors appear to have received *credible* TBTF back-door assurances last September
2. Banco Popular was fifth or sixth largest in Spain. Its resolution is, at best, a bungled run-induced partial bail-in: While BPM stockholders, COCOS and some nonsenior creditors were eventually wiped out, affected creditors were granted time to get out or collateralize their positions as the government burned through almost $4B in "Emergency Liquidity Assistance" in the bank's final days. Positions of depositors and senior creditors were assumed by the now regulator-approved and monopoly-strengthened zombie Santander Bank. Resolution strategy resembles FSLIC's squandering taxpayer value by merging several smaller zombie S&Ls into larger zombie institutions to keep from paying the full costs of resolving their insolvency in timely fashion.

Banco Popular’s contingent convertible bonds held up until this spring, with European regulators giving the bank a phony pass on its stress tests (IMF and NYU measures also show a huge need for capital in the stress-tested banks). Stockholders were slow to fear that the bank’s losses exceeded what the EU would allow the Spanish government to absorb. The data suggest either that massive losses had been concealed for some time in the accounting data that spring EU stress tests examined and/or that strengthening Santander’s implicit guarantees was a major focus of the deal)

Source: Bloomberg



Source: Bloomberg

WELL-KNOWN EFFECTS ON A FIRM'S STOCK PRICE OF RECEIVING AN EXPLICIT OR IMPLICIT GUARANTEE SUGGEST THAT MAJOR DBK COUNTERPARTIES RECEIVED ASSURANCES LAST FALL

- In accepting an outside guarantee, a bank enters *two* contracts:
  1) A *put option* that allows **losses** beyond its shareholder equity to become the responsibility of the guarantor for DBK unbooked losses.
  2) A *call option* on its **assets** that allows the guarantor to **stop losses** and take over the **upside** of the firm at a specified level of near-insolvency.
- For Too-Big-to-Fail banks, Mercy and Client-Protection motives, a propensity of managers and regulators to mischaracterize bank loss exposure, and authorities' "propensity not to exercise their call," increase firm stock price when its tail risk is high. Increased confidence in the negation of the call transfers value from taxpayers to stockholders and managers of TBTF banks across all stages of the financial cycle.

What “news” did DB release on its stock price’s turnaround date? - from The Brief – 9.27.16

posted by Michael Reif and Robins Kaplan LLP

Deutsche Bank officials are *denying reports* accusing the banking giant of asking Germany to provide it with aid to help it face the DOJ’s [opening] $14 billion settlement offer—a figure more than $8 billion above DB’s alleged legal reserves – NYTimes

The Times story included this excerpt:

"A Deutsche Bank spokesman said on Monday that John Cryan, its chief executive, had “at no point” asked Chancellor Angela Merkel to intervene in the issue with the Justice Department. [does not exclude other paths for requesting bailouts]

The spokesman said that a government bailout was “not on our agenda” [might be on someone else’s agenda though] and added, “Deutsche Bank is determined to meet the challenges on its own.” Despite the denial, speculation abounds that Deutsche Bank will once again be forced to ask investors for more cash at a moment of extreme weakness.“

Note: The DOJ eventually reduced its fine to $7.2 billion and DBK launched a $8.6 billion rights issue that shored up its net worth and diluted existing stockholders.

THESE QUOTES ILLUSTRATE HOW BANKS AND GOVERNMENTS USE SLIPPERY DENIALS AND HIDDEN TRANSFERS OF LOSSES AND LOSS EXPOSURES TO SUPPRESS CREDITOR RUNS

- INCOMPLETE FRAMING OF ISSUES AND ACTIONS AT STAKE
- DIVERSION (OFFER A SERIES OF HALF TRUTHS)
- DEFLECTION (ATTACK CRITICS RATHER THAN ISSUES)
- TRIAL BALLOONS (SEE WHAT LINES OF HALF-TRUTH MIGHT PROVE EFFECTIVE)

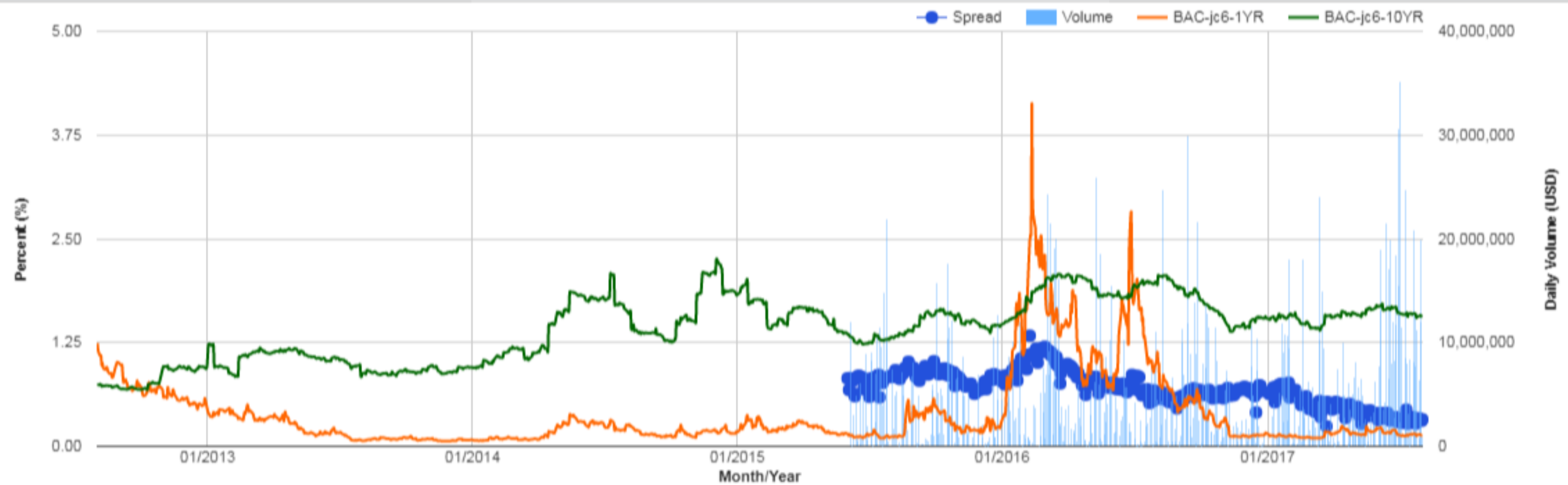
UBS AND BAC SHOW A SIMILAR PATTERN IN RECENT YEARS

BANK OF AMERICA CORP

Entity Bank of America National Association Charlotte N C Issue 1.75% NT REDEEM 05/06/2018 USD 250000 Callable N Seniority Senior

View By Spread Based on Matched Maturity Closest on the run Most Recent Trade Date 08/02/2017 Price $100.18 Volume 25,500,000 Spread 0.32 % Yield 1.54 %

Compare: + Add - Remove Range: 1Mo 3Mo 6Mo 1Yr 2Yr 5Yr 10Yr Max Custom Date



Source: Kamakura Corporation, TRACE, Market Axess, Exchange Data International