GRANT'S
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Progress skips a beat

The bonfire of the currencies now raging in Argentina, Turkey and Brazil, among other places, resembles an underground blaze in coal country. You smell the smoke and feel the heat through the soles of your shoes but only occasionally can you see the flames. The monetary fires, too, are often smoldering, particularly in the emerging markets. You forget they're there until they burst into the headlines.

Human progress, the fact and façade, is the broad topic under the *Grant's* lens. It naturally leads a discussion of the cycles of finance, to the Turkish exposures of Korean money-market funds (as linked through Qatari bank deposits) and the all-season consequences of ultra-low interest rates.

Push a shopping cart down the wondrous aisles of a big-box store. Check yourself into the New York Hospital for Special Surgery and walk out with, let us say, a brand new hip. Google any topic under the sun (you don't have to pay). Contemplate the blessed improvement in infant mortality rates. It's an age of miracles, all right, and we're the lucky ones who live in it.

Factfulness, a new best-seller by Hans Rosling, devotes more than 300 pages to proving the point. A Swedish physician, public-health advocate and famous TED talker who died last year at the age of 68, Rosling shows you that, however bullish you thought you were on the human race, you weren't bullish enough. Bill Gates, for one, is persuaded: "One of the most important books I've ever read," reads his dust-jacket blurb.

Never mind the hope of some distant sunlit future. It's the present that's brilliant. So far has the world come—so rich have we all become—that there is no longer any real difference between the haves and have-nots. Most of us—not Gates, of course—belong to the sprawling new planetary middle class.

In most every trend that matters, Rosling sets out to show, the big arrow is pointed up (ignore the nay-saying media, which don't mean to deceive but are the prisoners of negativity): People are living longer and earning more. Children are staying in school longer, women are marrying later. There are more vaccinations, more refrigerators, fewer plane crashes. Literacy is on the rise, violent deaths on the wane.

Rosling writes: "Graphs showing levels of income, or tourism, or democracy, or access to education, health care, or electricity would all tell the same story: that the world used to be divided into two but isn't any longer. Today, most people are in the middle."

But there's no such improvement in the money business. In science and technology, as this publication has long observed, progress is cumulative; we stand on the shoulders of giants. Yet in money and markets, progress is cyclical; we advance, then fall back. Buying high and selling low, borrowing too much, levering too much, trading too much, investors seem determined to prove that money is humanity's worst subject. The governments that issue the debt which, every generation or so, winds up in the sovereign equivalent of a bankruptcy proceeding seem intent on proving the same.

Progress may be relentless, just as Rosling shows, but markets are cyclical. More to the point, debt crises are recurrent. Or worse than recurrent: History suggests they're inevitable.

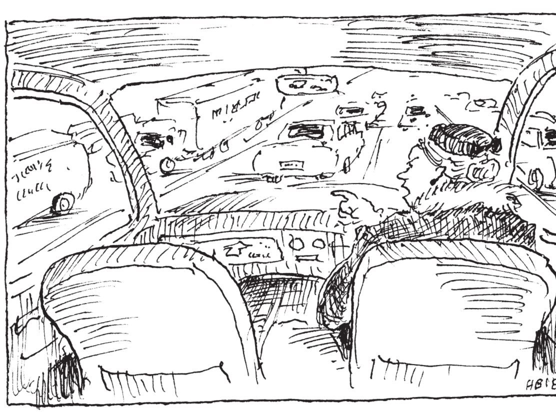
Monday's *Financial Times* quotes an award-winning understatement by an emerging-markets bond manager at a Swiss bank. "People," the man stated, "have been burnt by Argentina several times already." Yes, and so have about 16 generations of their forebears.

Colleague Carmen M. Reinhart has compiled a timeline of sovereign defaults. For Argentina, default years comprise 1827, 1890 (the first Baring's crisis), 1951, 1956, 1982, 1989, 2001, 2014. Brazil: 1828, 1898, 1902, 1914, 1931, 1937, 1961, 1964, 1983. And Turkey: 1876, 1915, 1931, 1940, 1959, 1965, 1978, 1982. A lack of space precludes a listing near defaults, monetary miscalculations and ordinary bond bear markets.

You wonder how the same race of men who conquered smallpox and abolished the slave trade and spread democracy and invented the internet could persist in the financial errors that periodically send the world into a tailspin. We ourselves wonder, though we are sure of the facts. In the cycles of finance, history never ends. It's one damn thing—and, to be sure, one good thing—after another.

One of the striking features of these

(Continued on page 2)



"Hey, not so fast and watch where you're going, why don't you?"

(Continued from page 1)

200 years of intermittent defaults is the variety of systems—monetary, political, financial—under which things went pear-shaped. Defaults have occurred with and without a gold standard, with and without "too-big-to-fail" banks, with and without such modern innovations as credit default swaps, securitized debt, waterfall debt tranches, the Bloomberg terminal, CNBC and floating-rate securities. Democracies, autocracies, juntas and empires have cheated their creditors.

Low interest rates, by fostering a demand for high-yield investments, are the time-tested source of trouble. Low British gilt yields drove income-seeking capital into dubious overseas investments in the 1820s and the 1870s. At that, maybe Rosling could claim a small point on behalf of progress in the evolution of sovereign lending and borrowing. An 1875 parliamentary post-mortem of British misadventures in Central and South America reports that, with one minor exception, none of the debtor governments had repaid "any portion of its indebtedness in respect of these loans, except from the proceeds of the loans themselves." By 1876, the Corporation of Foreign Bondholders, an English lobbying organization, counted 17 defaulting nation states, of which the largest was Turkey. And when a certain Mr. McCoan, a self-described 18-year resident of Turkey, rose up at a Corporation meeting to berate the Turkish government for its corruption and insolvency and to chastise the British press for its ignorance, he was shouted down. "He's a bear," the bondholders cried.

Indeed, much remains the same, especially the tidal power of interest rates. Walter Bagehot, editor of *The Economist* in the mid-1800s, famously warned against the mischief that a 2% bank rate stirs up. "People won't take 2 percent," Bagehot wrote; "they won't bear a loss of income. Instead of that dreadful event, they invest their careful savings in something impossible—a canal to Kamchatka, a railway to Watchet, a plan for animating the Dead Sea, a corporation for shipping skates to the Torrid Zone."

Still less do they settle for zero percent, or minus 1%. A decade of radical monetary policy has distorted the flow of the world's savings and investment in ways that some future congressional inquest will take years to unravel. The inquisitors will begin with the observation that, while the dollar is the world's currency, the Federal Reserve is America's central bank.

This contradiction is the remote source of the headlines that issue from the countries which, by Rosling's lights, are no longer "developing" but have already developed. In July, the Bank for International Settlements reported that EM borrowers, excluding banks, have raised $3.7 trillion in dollar-denominated debt at a cost that must have seemed more manageable when the dollar exchange rate was falling or stable rather than airborne, as now. Last week, an analysis from Bloomberg Intelligence called attention to $338 billion of dollar-denominated EM debt slated to fall due through 2022. "Turkish financials face the greatest liability pressure," writes analyst Damian Sassower, "as Yapi Kredi, Halkbank, Isbank and Garanti combine to make up more than half of the country's $19.4 billion in dollar debt maturities over the next 18 months."

When QE was young, in 2010, Fed chairman Ben S. Bernanke told the viewers of *60 Minutes* that the Fed could raise interest rates "in 15 minutes if we have to. So, there really is no problem with raising rates, tightening monetary policy." Eight years later, another Fed chairman, Jay Powell, is trying to prove his predecessor correct. The funds rate will certainly rise on Sept. 26, to between 2% and 2¼% from the present range of 1¾% to 2%, to judge by the structure of the futures markets. But problems there will be.

The unscripted possibilities are written between the lines of Tuesday's Bloomberg report of "the biggest single-day outflow ever" from Korean money funds: "While some of that may have been down to month-end withdrawals, such funds had been snapping up securities backed by deposits at Middle East banks in recent months." Reaching for yield, the funds placed deposits in Qatar. The Qatari banks extended credit to Turkish borrowers whose currency buys fewer dollars every day. The story quotes a sanguine Korean broker: "This has more to do with market sentiment than credit risk." But as credit itself is an opinion, the distinction between sentiment and credit risk is vanishingly thin.

In an underground fire, there's no telling where the flames might break out next. So, too, in an international monetary crisis. A change in government is one possibility. Colleague Harrison Waddill observes that Brazilian voters go to the polls on Oct. 7, evidently not to install a new free-market president. There are elections slated in Thailand in February, in Indonesia in April and in South Africa between May and August.

The Federal Open Market Committee votes every six or seven weeks. And even if there's no show of hands this month on the doctrine that the central bank's mandate stops at the water's edge, the burgeoning difficulties in Turkey and Argentina may force a re-think of the international consequences of the all-American Federal funds rate.

We can visualize both a headline and a tweet:

The New York Times: "In a surprise, Fed stands pat, cites crisis in foreign currencies."

@realDonaldTrump: "GREAT Decision by Jay Powell! NOBODY needs high Interest Rates!!"

Stranger things have happened.

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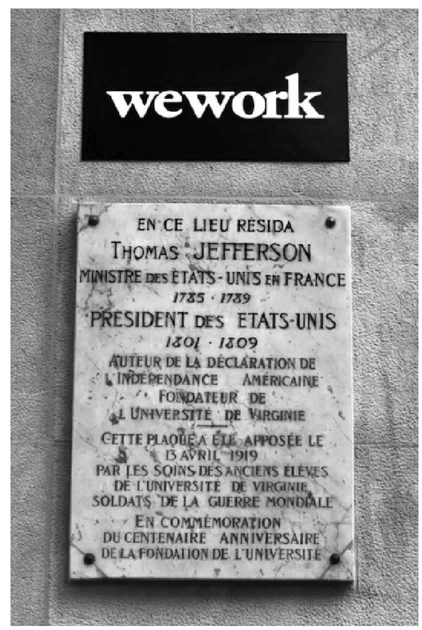

Vacationing subscriber Daniel Shuchman stopped short at the plaque at 92 Champs-Élysées in Paris. He took a snap and filed a report:

"The location of Thomas Jefferson's Paris home is now occupied by a very generously financed temporary workspace. At one of the most prominent addresses in the world, President/Ambassador Jefferson is duly commemorated, as is the prominence of the new landlord. Does this historical juxtaposition have any economic or investment significance? We shall see."

The Ackman agenda

John Law lives

China crisis

Corrupted accounting

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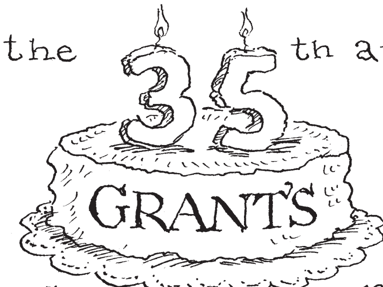

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Deal of the art

It's good to be rich—everyone says so—but not necessarily good to cater to the rich. A case in point is Sotheby's, the investor-owned half of the Christie's-Sotheby's global auction-house duopoly. The oldest listed company on the New York Stock Exchange, BID is struggling when it ought to be thriving. In preview, *Grant's* is bearish on it.

"Don't be so sure" is the theme of this unfolding analysis. For instance, you may read in the papers that Sotheby's has snagged a major artwork to auction—a Van Gogh, even. You expect the news will lift the BID share price, but it doesn't—and shouldn't. And why shouldn't it? Because, as Wendy Battleson, the former head of art finance at Christie's and the founder of and principal at Art Strategy Partners, Ltd., explains to colleague Evan Lorenz, Sotheby's has probably given away the store to secure the picture. "It's dangerous to get big-ticket items in the door," she says.

Just like Amazon.com, Inc., Sotheby's came into the world to sell books, and once upon a time it sold Napoleon's library. Not until 1913, 169 years after its founding in 1744, did the auction house make its mark in paintings. This was the sale of *Man in Black* by the 17th-century Golden Age Dutch portraitist Frans Hals; the price was a bit more than £9,000, and its price history was encouraging. From the prior sale in 1885, for £5, the picture had appreciated at a compound annual rate of 31%. In the year ended June 30, Sotheby's auctioned $6.1 billion worth of paintings and sculpture, as well as jewelry, wine and collectibles.

Auctions and private sales generate something like 70% of trailing pretax profits at Sotheby's. Financial services—e.g., loans against the collateral of a work of art—contribute 24%, and a miscellany of advisory work, brand licensing and wine retailing deliver the other 6%.

What with tiny interest rates, booming stock prices and the asset-friendly cast of international monetary policy, Sotheby's has surely had the wind at its back. Art sales worldwide rose by 11.9% in 2017, to $63.7 billion, according to the 2018 "Art Market Report" by Art Basel and UBS A.G. Dealers, of whom there are many, and auction houses, of which there are few, virtually split the business. Not that the dealer and auction communities share identical business models, or that they produce identical results. The auction market is both more volatile and more seasonal than the dealer market. The action, in auctions, is crammed into two calendar quarters, the second and fourth.

The art market is a kind of derivative of the worldwide speculative temper. Thus, prices and sales volumes retreated in 2014–16 in tandem with a weakness in commodity and share prices and a tightening of Chinese capital controls. Over that span, auction sales plummeted by 31.2% and dealer sales by 3.1%, though both roared back in 2017 with respective 26.7% and 2.3% advances in combined worldwide sales; in the first half of 2018, auction and private art sales for Sotheby's rose by 21.9%.

"According to 'Art Market Report,'" Lorenz relates, "Sotheby's and Christie's auctioned 19% and 23% of all art hammered down in 2017, but even those figures understate the heft of the pair. They are the go-to providers of liquidity for fine-art resales. To gain access to the most potential bidders (and thus the best price) on a Picasso or a Monet, prospective sellers, known in the trade as consignors, bring their works to the top two auction houses. Peruse any sell-side report, and you'll find pleasing references to 'duopoly' and 'pricing power.'"

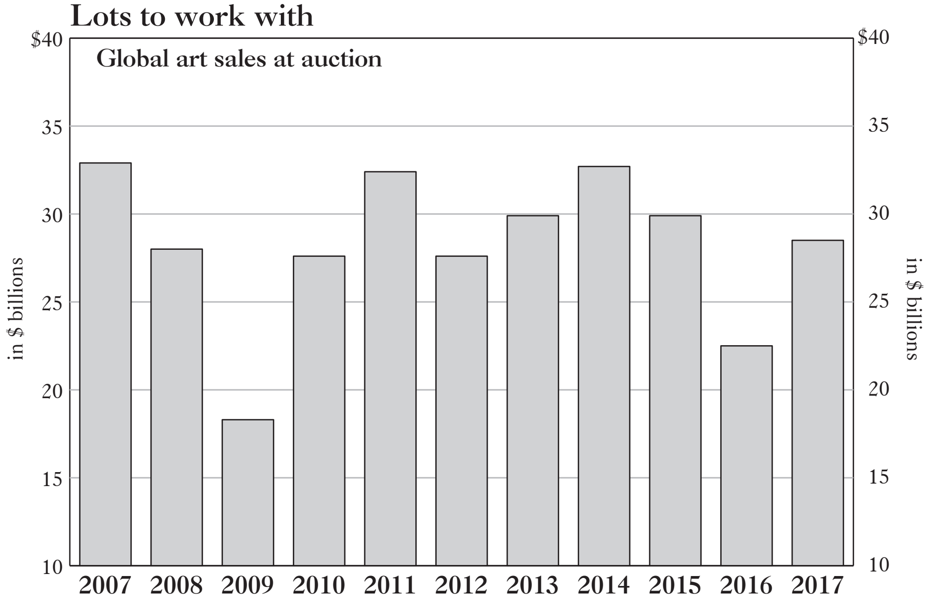
"Inflation," too, figures in the bullish vocabulary. "The art market's performance has historically correlated with global GDP growth and outperformed the equity market during inflationary times," writes Cowen, Inc. analyst Oliver Chen. "Specifically in the United States, where around 39% of BID's sales are generated, the fine-art market outperformed both equities and bonds during inflationary periods between 1950 and 2017."

Besides which, boosters observe, Sotheby's has made a success of technology, with revenue from online-only auction sales growing by 30% in the first six months of this year, to reach $100 million. The Street calls BID "un-Amazon-able."

Then, there's the shareholder-friendly management team. In May 2014, following a rancorous activist campaign, hedge fund Third Point LLC obtained three seats on the Sotheby's board in exchange for a pledge not to raise its ownership in the auction house above 15%. So Dan Loeb now sits on the board alongside the Duke of Devonshire. In March 2015, Tad Smith, former president and CEO of Madison Square Garden Co., was named the Sotheby's CEO. Within three years, BID had repurchased 16.9 million shares, or 25% of shares outstanding, for a consideration of $529.3 million.

Nonetheless, the balance sheet is presentable, with $292.5 million of net debt, equivalent to 1.5 times trailing earnings before interest, taxes, depreciation and amortization (EBITDA) and 1.8 times EBIT. First-half operating income covered interest expense

Lots to work with



source: 2018 "Art Market Report"

by five times. The company is rated double-B-minus by Standard & Poor's, near the penthouse of junk.

"That would seem a compelling narrative despite the hefty price tag of 21.8 times estimated 2018 earnings," Lorenz observes. "Unfortunately, the story line has left the bullish analysts ill-equipped to explain Sotheby's 2018 results. In the first two quarters, auction and private sales boomed by the aforementioned 21.9%, but pretax profit for the relevant Sotheby's division registered a 16% decline."

A former senior executive from one of the major auction houses sums up the problem in an epigram: "It is a duopoly without pricing power," he tells Lorenz. "That is the thing that is hard for people to understand. They always think the prices and volume go up, we are going to clip a standard commission against ever increasing prices and volumes. They must be printing money. The auction houses don't manufacture anything. Every sale, they need to find new properties. They don't do original issues. They don't do IPOs. It is a pure secondary market."

Smith, though he's done a superb job at returning capital to the shareholders, has been less successful at expanding margins and market share. Then, again, it just might be that Sotheby's—for all the fire and fury of the activist campaign—is still not a profit-maximizing enterprise. Technically, management works for the shareholders. Practically, it works for the customers, especially the ultra-rich ones, while doing all in its power to deny consignments to Christie's. "[R]eally," Jennifer Park, vice president of investor relations at Sotheby's, tells Lorenz, "a lot of times, at the end of the day, especially with something at the uber/high end (our expertise is very strong at the very high end), a lot of times it comes down to financial terms." In fact if not in name, Sotheby's is a prestige-maximizing enterprise.

Unfortunately, the financial terms that cement friendly relationships with the big consignors are the very ones that pinch the bottom line. Such terms take the form, for instance, of a price guarantee or of an agreement to kick back a portion of the commission—an "enhanced hammer." Straightforward collateralized loans, another arrow in BID's financial-services quiver, do no damage to the bottom line but rather bolster it.

Then, again, not every wealthy consignor needs liquidity, so clients favor the margin-shrinking options. In the art market, the buyer pays the commission, known as a premium. The amount of premium charged on top of a winning bid varies by auction price as well as by location. In New York, the figures are these: 25% on top of the first $300,000 of a winning bid; 20% on top of the portion of a bid between $300,000 to $4 million; and 12.9% on top of the portion of a bid above $4 million.

Not all consignments for auction garner bids in excess of their reserve minimums, and some winning bidders default on their payments. As a result, consignors like the surety of a guarantee. What auction houses don't like is getting stuck with stale or unvendable merchandise. Guaranteed but unsold properties are how Sotheby's builds its own accidental art collection; the $51.6 million of inventory sold in the first two quarters of 2018 resulted in a loss of $3.4 million.

Hence, the prevalence of guarantees. To lay off risk, Sotheby's may contract with art dealers to enter a bid in exchange for a portion of the profit

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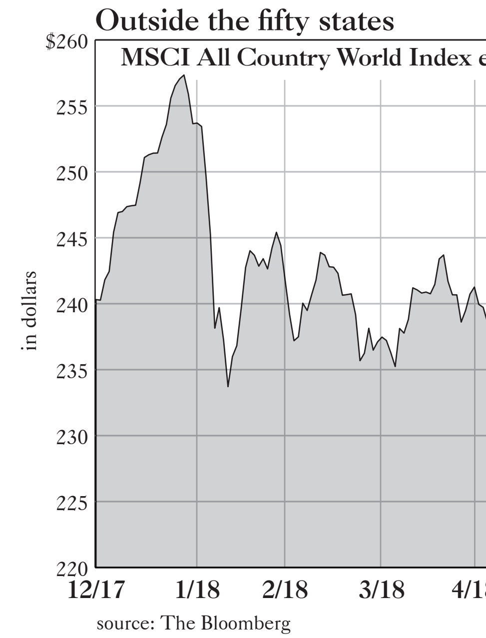
CREDIT CREATION



America guz

Evan Lorenz writes:

A hike is a virtual certainty at the Federal Reserve's Sept. 26 meeting: The interest-rate futures market pegs the odds at 96%. And why not? The Institute for Supply Management's manufacturing PMI and Conference Board's consumer-confidence indexes touched 14- and 18-year highs in August. According to the minutes from the Fed's Aug. 1 meeting, Federal Open Market Committee members expect continued above-trend growth and a pickup in inflation.

Investors concur. According to the August Bank of America Merrill Lynch Global Fund Manager Survey, a net 67% of respondents are bullish on U.S. profit growth, a 17-year high. The S&P 500 set a new, all-time high last Wednesday.

"The U.S. economy is fine," Andrew Lees, a founding partner at research boutique Macro Strategy Partnership, tells *Grant's*. "The whole point is the U.S. economy is growing effectively at the expense of sucking liquidity out of the rest of the world, whether that is U.S. corporations repatriating foreign assets [or the Fed tightening], it doesn't really matter."

By Lees's calculation, the world's money supply is down $3.4 trillion, or 4.2%, from its March high. Macro Strategy calculates this figure by adding up the

FEDERAL RESERVE BALANCE SHEET

(in millions of dollars)

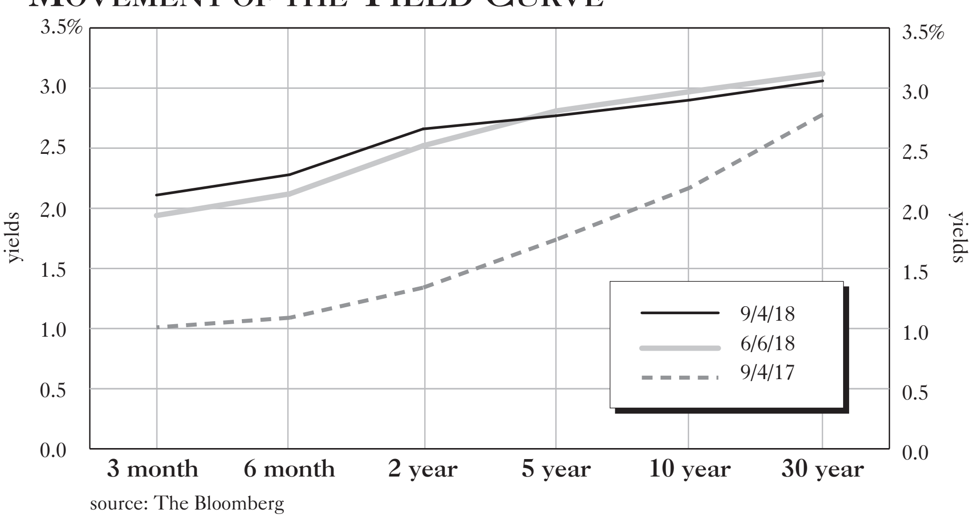
	Aug. 29, 2018	Aug. 22, 2018	Aug. 30, 2017
The Fed buys and sells securities…			
Securities held outright	$4,029,546	4,034,202	4,241,185
Held under repurchase agreements	0	0	0
and lends…			
Borrowings—net	294	284	227
and expands or contracts its other assets…			
Maiden Lane, float and other assets	155,824	155,373	171,987
The grand total of all its assets is:			
Federal Reserve Bank credit	4,185,664	4,189,859	4,413,399
Foreign central banks also buy, or monetize, governments:			
Foreign central-bank holdings of Treasurys and agencies	$3,429,056	$3,429,843	$3,345,018

SWISS NATIONAL BANK BALANCE SHEET

(in millions of Swiss francs)

	July 2018	June 2018	July 2017
The SNB holds...			
Gold	CHF 40,417	CHF 41,562	CHF 41,101
and buys and sells currencies...			
Foreign-currency investments	776,935	783,814	745,274
and expands or contracts its other assets…			
Other assets	10,584	10,899	10,550
Its assets total:	CHF 827,935	CHF 836,275	CHF 796,925

MOVEMENT OF THE YIELD CURVE



• Cause & Effect

zles liquidity

broadest available measure of money in each country, e.g., M-3 in the eurozone and M-2 in the United States, and translating these figures into the currency in which most trade is denominated, i.e., U.S. dollars.

"At a country level," Lees writes in an Aug. 31 note to clients, "the biggest loss has been China followed by the eurozone, Japan and then Brazil, but in percentage terms, the biggest fall has been Turkey, followed by Brazil, Russia, Sweden and Britain." It is, perhaps, no surprise that emerging markets, led by Turkey, are at the start of what appears to be a growing crisis, or that the MSCI All Country World Index Ex-U.S. is down 11% from its January peak.

The last time Macro Strategy's world money supply measure slumped was in the 2014–16 commodity-cum-China sell-off. In February 2016, 88% of investors believed that the world was locked in secular stagnation rather than in the exceptionalism of American corporate profits, according to the Bank of America survey.

America has grown no less connected to the rest of the world since Donald Trump's election. In 2017, the companies comprising the S&P 500 revenue generated 43% of their revenues outside the 50 states.

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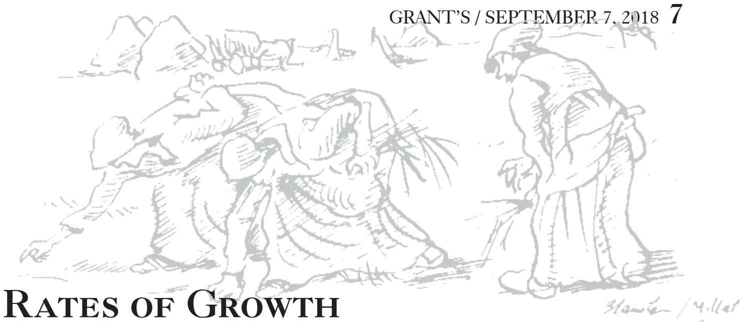


Annualized Rates of Growth
(latest data, weekly or monthly, in percent)

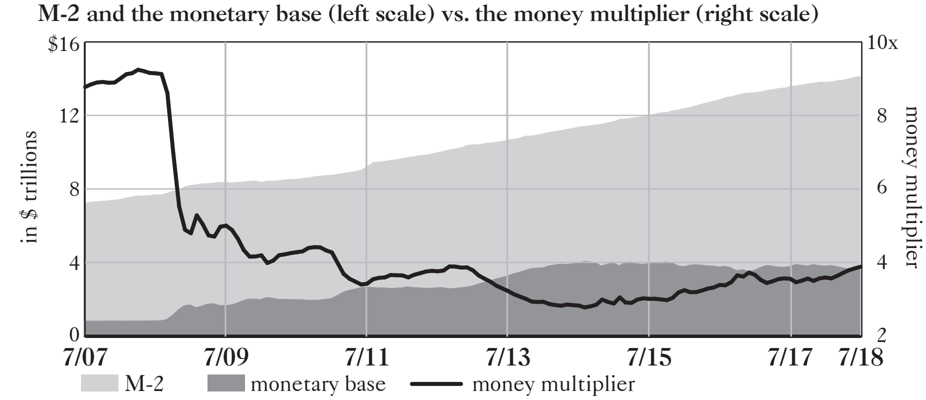
	3 months	6 months	12 months
Federal Reserve Bank credit	-9.2%	-7.7%	-5.0%
Foreign central-bank holdings of gov'ts	5.2	1.5	2.7
Swiss National Bank assets	-6.2	4.0	3.9
Commercial and industrial loans (July)	7.0	9.4	5.7
Commercial bank credit (July)	4.6	4.0	4.0
Asset-backed commercial paper	-12.0	-1.7	-4.9
Currency	4.9	7.1	6.8
M-1	2.1	2.8	3.5
M-2	5.5	4.8	3.9
Money zero maturity	4.2	3.9	3.6

Reflation/Deflation Watch

	Latest week	Prior week	Year ago
FTSE Xinhua 600 Banks Index	13,298.74	13,235.90	14,747.19
Moody's Industrial Metals Index	1,959.26	1,921.73	2,044.38
Silver	$14.44	$14.79	$17.48
Oil	$69.80	$68.72	$47.23
Soybeans	$8.33	$8.42	$9.36
Rogers Int'l Commodity Index	2,480.30	2,468.89	2,236.35
Gold (London p.m. fix)	$1,202.45	$1,197.70	$1,311.75
CRB raw industrial spot index	491.21	492.86	516.96
ECRI Future Inflation Gauge	(July) 112.7	(June) 113.1	(July) 111.9
Factory capacity utilization rate	(July) 78.1	(June) 78.0	(July) 76.7
CUSIP requests	(July) 1,450	(June) 1,704	(July) 984
Fed's reverse repo facility (billions)	0.40	4.67	125.0
Index of central-bank stocks in gold terms*	108.81	110.60	59.42

*Index=100 as of 12/31/2007

Effectiveness of the Monetary Policy
M-2 and the monetary base (left scale) vs. the money multiplier (right scale)



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from the auction. If, for instance, a picture were expected to fetch $50 million, a guarantor might commit to pay $48 million in exchange for a fee. Two major paintings that were put to third-party guarantors, *Nu Couché (Sur le Côté Gauche)* by Amedeo Modigliani for $157.2 million and *Buste de Femme de Profil (Femme Écrivant)* by Pablo Picasso for $36 million, accounted for much of Sotheby's first-half earnings miss. According to an Aug. 6 CNBC report, Sotheby's likely had a small profit on the Modigliani while losing $6 to $7 million on the Picasso.

"People are increasingly concerned," Battleson says, "that because the market came back so quickly after 2008 and prices went crazy, so that for many of the artists, in particular postwar and contemporary, the market has flattened and probably is not going to increase for the foreseeable future. That is one of the reasons why the Warhol market has really cooled off and some of the other postwar and contemporary artists who did well four or five years ago are not super exciting.

"That said," Battleson goes on, "people still want to sell these pieces but don't want to sell them and take the market risk that everything can fall apart. They demand guarantees, and the auction houses are so competitive with each other that they will do this and they will do it even when the guarantees are relatively risky. That is where Sotheby's got burned this last season: by putting out some guarantees that were very risky."

Auction catalogues tell bidders which lots come to market with a price guarantee, but there's no such disclosure in the financial statements of Sotheby's. The guarantees in place during 2008 cost the guarantors dearly, and the auction houses hastened to drop the business. At length, they—and outside, or "third-party," guarantors—re-entered it. According to Lobus, a data-analytics provider, around half of the May auction sales at Sotheby's, Christie's and Phillips (a johnny-come-lately, founded in London in 1796) were backed by some form of price guarantee. Third parties provided 95% of those assurances.

The identity of the guarantors is typically kept secret. Among the 30 or so major dealers reported to engage in the practice are William Acquavella (Acquavella Galleries), David Nahmad, Guy Bennett (Qatar Museums) and Robert E. Mnuchin (Mnuchin Gallery and father of the Treasury secretary). Wealthy collectors, such as Steve Cohen, founder of Point72 Asset Management, have also offered guarantees.

"In its 10-Q and 10-K reports, Sotheby's is required to report contingent liabilities like guarantees outstanding at a point of time," Lorenz observes. "While this doesn't tell us a full period's activity, it is indicative of what BID is up to. Thus, on Aug. 2, 2017, Sotheby's had $17 million worth of guarantees outstanding, of which $2.7 million were ceded to third parties. On the next day, BID's book of guarantees ballooned to $194 million, of which third parties had backstopped $81.2 million."

This is a delicate matter—paying for bids, the auction houses would likely incur the displeasure of the Securities and Exchange Commission if the assets in question were stocks instead of paintings. As it is, some art buyers, objecting to the principle of price guarantees, sound like value investors in Tokyo who can't get their price because the Bank of Japan keeps buying up the stock market. Asking around, Lorenz heard unverifiable stories about guarantors demanding more than their pound of flesh from the auction houses in exchange for a commitment to bid. He heard no stories about guarantors demanding to help the auction houses to improve their profit margins.

The Sotheby's plain-vanilla art-lending business is as wholesome as you please, but rising interest rates do it no good; as of June 30, the aggregate loan-to-value ratio of the $480 million loan book was 41%, while the average interest charge was 7.2%, i.e., 500 to 600 basis points over the London interbank offered rate. The upcreep in three-month Libor, to 2.3% from 1% in 2016, has priced the marginal Sotheby's loan applicant out of the market.

"Consigners are saying," Park tells Lorenz, "'I don't know that I need to pay Libor plus 5% or 6%. I may just not have a loan on this piece or might just pay back the loan now.' Interest rates are certainly impacting us with that business. Going forward, though, we love the business, and it would be great if it could grow, but, I think, with interest rates where they are, it is going to be a harder path to having that grow as much as we would like otherwise." Since year-end 2016, the loan book has declined by 29%.

The Tax Cuts and Jobs Act of 2017 introduces another complication. Yes, the bill reduces tax rates on income, but also it raises the cost of trading art. American collectors have long made use of 1031 exchanges, in which capital gains from the sale of one property are deferred by purchasing a similar property. Such exchanges are now limited to President Trump's favorite asset class, which is not pictures. America weighs heavily in the market, accounting for 38% of BID's sales, so a slowdown in the velocity of American art-buying could hurt the Sotheby's bottom line.

China, too, figures in the corporate future. In 2017, Hong Kong and the People's Republic furnished 22% of revenue for Sotheby's. "Equally important is the impact of Asian clients felt not just in Hong Kong but in our New York, London, Paris and Geneva salesrooms," CEO Smith said on the Sotheby's Aug. 6 earnings call. "In the first half of 2018, Asian clients accounted for 28% of our Aggregate Auction Sales and purchased eight of the top 20 lots sold at Sotheby's year-to-date." Sotheby's would rue it if China's financial markets crashed or if Beijing slapped on even tougher capital controls to boost the renminbi/dollar exchange rate.

The Street projects that Sotheby's will expand adjusted EBITDA margins to 26% of sales in 2019 from 20% of sales in 2017. We grant the possibility, especially if Sotheby's stops competing with Christie's and further steps out of character by renouncing the practice of managing for the maximization of corporate prestige and customer gratitude. Besides, as Lorenz points out, the auction portion of the art market exhibits more cyclicality than even the S&P 500. BID could prove a superchanged play on a pullback in share prices.

Of the six analysts who cover BID, four rate the company a buy and none a sell. Over the past 12 months, insiders have sold 35,321 shares for $1.8 million. Perhaps the Street knows something that insiders don't—or vice versa.

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Pigs in blankets

On Wall Street, success begets failure. Take a good idea, emulate it and embellish it, drive it into the ground like a tomato stake. Voilà: It's a bad idea. Which brings us to collateralized loan obligations, a great idea of the last recession and a potential disaster for the next one.

A CLO consists of loans and a manager. It exists to generate fees for the promoters and income for the investors. It's not quite true that a CLO is only as good as its loans. What is true is that a portion of a CLO is only as good as its loans, that portion being the junior one, equity and mezzanine debt. Deterioration in the quality of late-boom debt puts those segments at risk.

The assets of a CLO consist of syndicated (i.e., tradable) bank loans: the senior, floating-rate, secured kind. They're called leveraged loans because the borrowers are leveraged. The liabilities, too, consist of loans. The loans come in many segments, or "tranches," from senior (triple- and double-A) to mezzanine (single-A and triple-B) to junk (double-B). A sliver of equity—about 10% of the liabilities—lies under the debt.

Imagine a company that, in raising senior debt, was bound to raise junior debt and equity at the same time. Imagine having to please, simultaneously, the many separate investor constituencies. You have just stepped into the shoes of the would-be CLO builder.

Without the equity and lower-rated debt, there would be no triple-A tranches—as you will appreciate by and by. Without triple-A tranches, there would be no CLOs. Without CLOs, there would be many fewer private-equity transactions. And without lots of private-equity deal-making, there would be a very different kind of stock market.

CLOs hold about half of the $1 trillion in leveraged loans outstanding. The difference between the yield on their assets and the cost of their liabilities is what generates their income. On assets, a typical CLO earns 330 basis points over the London interbank offered rate. On liabilities, it pays 150 basis points over the same rate. Leverage magnifies the 180 basis-point net return.

CLOs are complex structures, but the problems they face are simple. The absence or evisceration of covenants in recent issues of leveraged loans is one (a covenant, as you recall, is the fine print that holds the corporate borrower to a certain standard of financial good housekeeping). The deterioration of the ratings of those loans is another problem (*Grant's*, July 13). Thus, in the second quarter, 45% of newly issued leveraged loans were spotted single-B, i.e., junk, up from 38% in 2017 and 28% in 2006. So far, the downshift in credit quality has roiled commentators more than investors. Trouble starts when defaults do. Moody's predicts that recovery rates in bankruptcy on first-lien loans will drop to 60% of par value in the next recession, from an average of 77% between 2007 and 2016. "Real bank loans are good instruments," says Michael Lewitt, publisher of *The Credit Strategist*, in conversation with colleague Fabiano Santin. "The problem is they're really bonds now."

Unsecured bonds lay a much weaker claim on corporate assets than do old-fashioned, covenant-laden, first-lien bank loans. Once upon a time there were CBOs—collateralized bond obligations. They walked the Earth at the turn of the 21st century but became extinct on account of the debilitating losses they bore in and around the 2001 recession (see the issue dated Aug. 17, 2001). Contrariwise, in and after the 2007–09 recession, CLOs prospered. We doubt they will prosper next time.

The accompanying table fleshes out the details of a representative CLO structure. Senior lenders, who fund most of the balance sheet, hold first call on cash flows; mezzanine and equity holders get what remains. The subdivision of the liabilities into tranches allows investors to pick their poison—to play it safe at the top, or seek out higher returns, with commensurate risk, in the middle or at the bottom.

Typical capital structure of a CLO

	percentage of CLO liabilities	coupon (spread over Libor in basis points)
triple-A	62.0%	115
double-A	12.0	160
single-A	6.0	195
triple-B	5.5	300
double-B	4.5	585
equity	10.0	—

weighted average coupon: 145

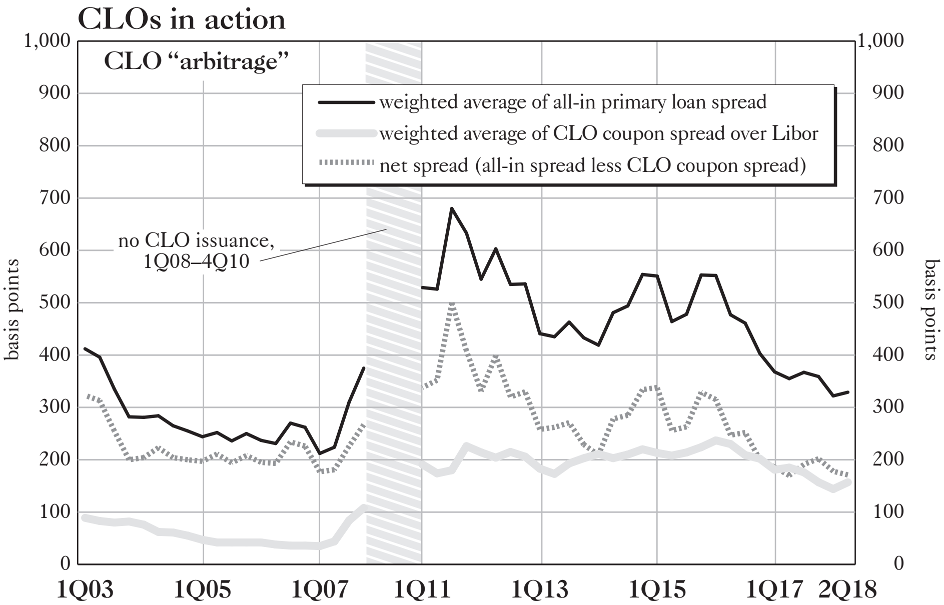
sources: *Grant's*, Wells Fargo Securities

There are protocols in place to mitigate risk. Thus, if a CLO does not generate sufficient cash flow to pay the senior lenders, or if it flunks the tests to assure adequate collateralization and borrower diversification, the manager must take corrective action. "Robust and opportunity-rich," the proud promoters call their creations.

And if past were prologue, a CLO critic would have nothing to complain about. Moody's reports that, among the 9,181 CLO debt tranches issued between 1993 and 2017, only 1.6% defaulted, and that not one default touched a tranche rated double-A or higher.

Endowments and regulated financial institutions find much to like in the triple-A-rated tranches, both for the safety they afford and the yields they deliver. Quoted at about 115 basis points over the Libor curve, they fetch on the order of 4%. "Compare that," as Santin suggests, "to a triple-A-rated, 10-year commercial mortgage-backed security offered at a credit spread of 83 basis points over the swap curve (total yield of 3.80%). Or to a double-A-rated, fixed-rate, 10-year corporate bond paying 62 basis points over Treasurys (total yield of 3.67%)."

Which brings us to the portion of the CLO capital structure most exposed to the downshift in asset quality—and to the upside of increasing asset prices, gently rising interest rates and a benign default environment. Equity tranches in the 2005–07 CLO vintages earned annual gains of 14%–18%, calculates David Preston, senior analyst at Wells Fargo Securities LLC. Such performance speaks for itself, though a bull might add that the majority holder of a CLO's equity exercises control over decisions to call or refinance the assets after the passage of a stipulated period (the "reinvestment" period). Fans of CLO equity call it a superior



sources: Intex, S&P Global Market Intelligence's LCD, Wells Fargo Securities

kind of private equity, as they ask: Why pay fees to KKR or Blackstone when you can reap LBO-style rewards by investing in the bottom of a CLO capital stack?

There are lots of moving parts in CLOs. Here are a few: the frequency of prepayments (like the American mortgagor, the corporate borrower can refinance its leveraged loan at any time), the pricing of credit risk in the loan market, the length of time in which a manager may reinvest cash flows in new securities, the spread between interest income and funding costs within the CLO and the variation between one-month and three-month Libor (most borrowers have the option of switching to the lower of the two rates).

Especially do assumptions about defaults and recoveries inform predictions about future returns, or lack thereof. Take the simplified example of a CLO that earns 330 basis points plus Libor on its assets and pays 150 basis points plus Libor on its liabilities. After subtracting 40 basis points in management fees, net spread comes to 140 basis points—before defaults.

Now assume a default rate of *2%*—admittedly, a generously low one. And assume a recovery rate of 80% of par on loans in bankruptcy—admittedly, a high one. The result is a default-adjusted net spread of 100 basis points. Leverage that to 10 times the equity portion, and you get 10% in net equity return.

Under more conservative (though still moderate) assumptions of a 3% default rate and a 60% recovery rate, return before leverage falls to just 20 basis points. Even 10 times 20 basis points is, in comparison with earlier CLO equity returns, a pittance. "Clearly, the economics don't look great for CLOs coming to market at today's net spread level," Santin observes.

Few differences between today's leveraged loans and the pre-Great Recession vintages are more critical than the loss of covenant protection. Current CLOs typically allow exposure to cov-lite in more than 65% of the portfolio compared with 10% to 15% in the past—with generous allowances for redefining certain cov-lite loans as non-cov-lite.

The principal purpose of loan covenants is to keep borrowers on the straight and narrow, just as the principal purpose of traffic lights is to prevent automobile accidents. The secondary purpose of loan covenants is to generate income for the lenders, just as the secondary purpose of traffic signals is to top up municipal coffers with the proceeds of speeding tickets. When a borrower trips a covenant, that company comes hat in hand to the lender to negotiate an amendment fee and reset the loan to a higher interest rate. No more covenants, no more tripping, no more amendments—and no more extra income to the CLOs (which goes, or rather went, to the equity investors).

What the CLO equity holder wants is time and volatility—"optionality," as the adepts say. In a sense, Santin observes, the equity tranches are call options on credit spreads. In times of trouble, CLO managers can reinvest cash flows in cheap loans, as they so profitably did in the crisis 10 years ago when loan prices plunged from par to 70. But they can reinvest only during a stipulated reinvestment period, which used to span seven years. Today, it's typically four years. "You can imagine a case," Santin points out, "in which a credit washout occurs after the expiration of the reinvestment period. The CLO manager's hands would then be tied. Bargains might abound, but the manager would be unable to buy them."

A bull might counter, in the first place, that there's no predicting if or when another debt crisis will happen and, second, the equity tranches of the 2007 CLO class delivered the stupendous median return of 18.4% per annum. If the skies fell in 2008, so did loan prices (while the cost of borrowing for the 2007 vintage CLOs was only 50 basis points above Libor, one quarter of today's typical rate). Yes, mark-to-market net asset values on CLOs were sawed in half, in keeping with the collapse in loan prices, but managers boldly seized the opportunity and prices recovered. Perhaps most importantly, the loans themselves, armored with covenant protection, proved money good.

Many things are different now, of course. What is no longer different is the short-lived risk retention rule of the Dodd-Frank Act. It required CLO managers to keep up to one-half of the equity value of the structures they originated, the better to align their interests with those of their investors. To the discreet applause on Wall Street, a U.S. Court of Appeals struck down the rule in February.

Naturally, the lowest interest rates in 3,000 years have made their mark on the way people lend and borrow. Corporate credit, as Preston observes, is "lower-rated and higher-levered. This is true of investment-grade corporate debt. This is true in the loan market. This is true in private credit."

So corporate debt is a soft spot, perhaps *the* soft spot of the cycle. It is vulnerable not in spite of, but because of, resurgent prosperity. The greater the prosperity (and the lower the interest rates), the weaker the vigilance. It's the vigilance deficit that crystalizes the errors that lead to a crisis of confidence. At some unpredicted moment, there's a scramble for cash, a collapse in prices and the start of a bull market in value. You can't time the inflection point, but you can watch for the telltale signs.

The CLO market itself might send up a flare. Perhaps the issuance of leveraged loans will dry up, or the customary investors in CLO equity tranches will pull back. When all's well, CLO seed money is there for the plucking. Big banks eagerly front the senior portion of the so-called warehouse financing to give a new structure its start. CLO managers not only bankroll the warehouse equity, but also fold that initial stake into the final structure.

And for now, the funds remain pluckable. However, Jim Schaeffer, deputy chief investment officer at Aegon Asset Management, tells Santin that he recently noticed some reluctance to furnish warehouse equity. Aegon is an experienced CLO builder. "We've been able to issue a couple of CLOs this year," Schaeffer says, "which has been great. But when we went back to those who had been providing warehouses, there was just a little pause in the marketplace. It's not that there wasn't any demand. It was just a little bit of a pause." And he adds, "You can't really do a warehouse without the equity or the first loss piece."

CLOs are built from the ground up—from the equity level to the triple-A level, not the other way around. Refusal to commit to new equity investments would imperil the working of the machine that sustains American leveraged finance. Based on the 10% size of the typical CLO equity stake, there is $50 billion at risk of impairment if default rates were to accelerate.

Schaeffer says he wouldn't make too much of this slight hesitation, and we won't, either. What we will do is keep a weather eye out for something greater than a pause. As Schaeffer himself puts it, "You have to be early, because when the market turns at the end of that cycle—given the illiquidity and volatility—it turns very quickly, and the whole market is trying to sell."

Those who track the credit cycle will naturally want to stay current with the changing values of CLO equity tranches. Alas, they are closely held. The next best approach is to monitor the quoted prices of the public vehicles that, according to Wells Fargo Securities, held $2.6 billion in CLO equity exposure at the end of the second quarter. Two such entities may prove especially informative.

Oxford Lane Capital Corp. (OXLC on the Nasdaq), which debuted in January 2011, buys CLO equity and mezzanine pieces and nothing else. Its market cap foots $311 million and the shares trade at an 8% premium to NAV. Assuming reinvested dividends, the fund has returned 10.4% a year since inception, compared with 13.6% for the S&P 500 (at no premium to NAV, performance would have been 9.2% per year). The shares yield 15%.

Eagle Point Credit Co., Inc. (ECC on the Big Board) came to market in October 2014, also for the express purpose of buying junior portions of CLO capital structures. Its market cap stands at $394 million, and the shares command a 10% premium to NAV, though traded with a 4% discount in 2016. Assuming reinvested dividends, the stock has returned 11.2% a year, compared with 13.1% for the S&P 500 (at no premium to NAV, performance would have been 8.51% a year). The shares yield 13.2%.

To enhance returns, Oxford Lane and Eagle Point both issued debt securities equal to 50% of NAV. Watch this space.

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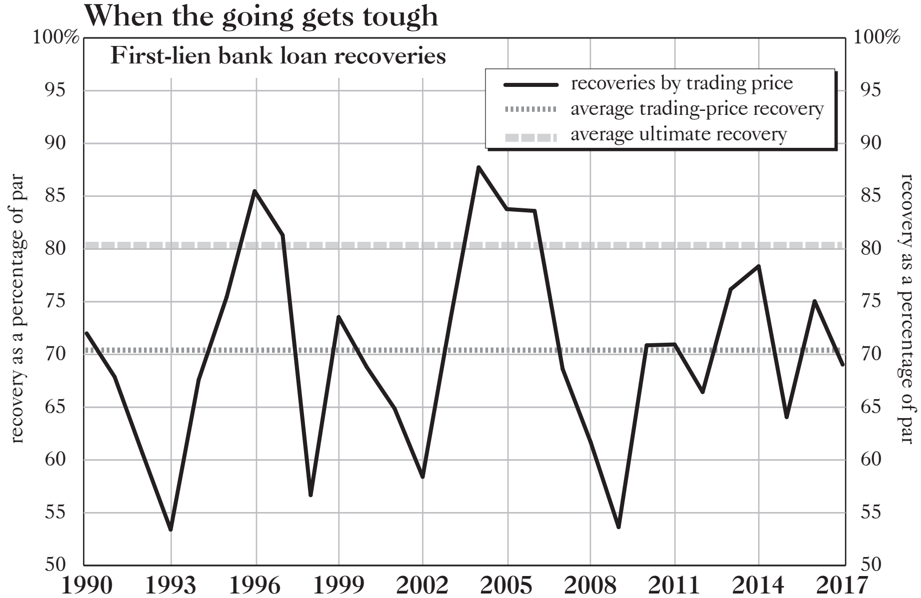
When the going gets tough



Note: Trading-price recovery is based on loan price at or after default, while ultimate recovery is based on the value creditors realize at the resolution of a default event (typically one or two years following the initial default date).
source: Moody's Investors Service, Inc.

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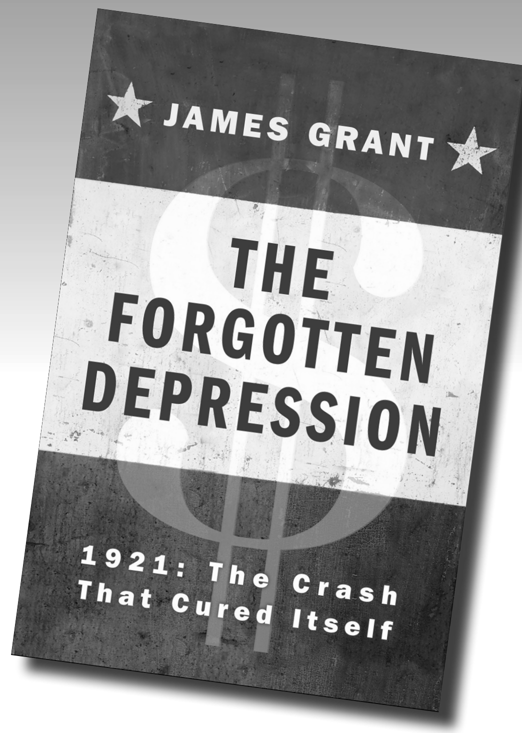

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