Harvard Swaps Are So Toxic Even Summers Won't Explain

By Michael McDonald, John Lauerman and Gillian Wee

Dec. 18 (Bloomberg) -- Anne Phillips Ogilby, a bond attorney at one of Boston's oldest law firms, on Oct. 31 last year relayed an urgent message from Harvard University, her client and alma mater, to the head of a Massachusetts state agency that sells bonds. The oldest and richest academic institution in America needed help getting a loan right away.

As vanishing credit spurred the government-led rescue of dozens of financial institutions, Harvard was so strapped for cash that it asked Massachusetts for fast-track approval to borrow $2.5 billion. Almost $500 million was used within days to exit agreements known as interest-rate swaps that Harvard had entered to finance expansion in Allston, across the Charles River from its main campus in Cambridge, Massachusetts.

The swaps, which assumed that interest rates would rise, proved so toxic that the 373-year-old institution agreed to pay banks a total of almost $1 billion to terminate them. Most of the wrong-way bets were made in 2004, when Lawrence Summers, now President Barack Obama's economic adviser, led the university. Cranes were recently removed from the construction site of a $1 billion science center that was to be the expansion's centerpiece, a reminder of Summers's ambition. The school suspended work on the building last week.

"For nonprofits, this is going to be written up as a case study of what not to do," said Mark Williams, a finance professor at Boston University, who specializes in risk management and has studied Harvard's finances. "Harvard throws itself out as a beacon of what to do in higher learning. Clearly, there have been major missteps."

Worst Time

Harvard panicked, paying a penalty to get out of the swaps at the worst possible time. While the university's misfortunes were repeated across the country last year, with nonprofits, municipalities and school districts spending billions of dollars on money-losing swaps, Harvard's losses dwarfed those of other borrowers because of the size of its bet and the length of time before all its bonds would be sold.

In December 2004, Harvard entered into agreements that locked in interest rates on $2.3 billion of bonds for future construction in Allston, with plans to borrow $1.8 billion in 2008 after they broke ground and the remaining $500 million through 2020. At the time, the benchmark overnight interest rate set by the U.S. Federal Reserve was 2.25 percent. The agreements backfired last year after central banks slashed lending rates to zero and the value of the contracts plunged, forcing the school to set aside cash.

'Education Business'

Borrowers use swaps to match the type of interest rates on their debt with the rates on their income, which can help reduce borrowing costs. Lenders and speculators use swaps to profit from changes in the direction of interest rates. A bet on higher rates, for example, means paying fixed rates and receiving variable. At Harvard, nobody anticipated some interest rates going to zero, making the university's financing a speculative disaster.

Harvard's woes stemmed from misunderstanding its role, said Leon Botstein, president of Bard College in Annandale-on-Hudson, New York.

“We shouldn’t be in the banking business, we should be in the education business,” Botstein said in a telephone interview.

The financing plan using the swaps was developed by the university’s financial team and discussed with the Debt Asset Management Committee, an oversight group, according to James Rothenberg, a member of the President and Fellows of Harvard College, or Harvard Corp., and the school’s treasurer, a board position.

The swaps plan was then approved by Harvard Corp. and implemented and monitored by the financial team, Rothenberg said in an e-mail.

Making Sense

Summers, who left Harvard in 2006, declined to comment. As president and as a member of the Harvard Corp., the university’s seven-member ruling body, Summers approved the decision to use the swaps.

The strategy made sense in the economic climate of the time, Rothenberg said in another e-mail. Rothenberg is chairman of Capital Research & Management Co., the investment advisory unit of Capital Group Cos. in Los Angeles.

“Rates were at then-historic lows, and the university was contemplating a major, multibillion-dollar campus expansion,” Rothenberg said. “In that context, locking in our financing costs so that we would achieve some budgetary certainty had definite advantages.”

Demanding Cash

Harvard’s failed bet helped plunge the school into a liquidity crisis in late 2008. Concerned that its losses might worsen, the school borrowed money to terminate the swaps at the nadir of their value, only to see the market for such agreements begin to recover weeks later.

Harvard would have avoided paying the costs of its swap obligations by waiting. Its banks, including JPMorgan Chase & Co., headed by James Dimon, were demanding cash collateral payments -- ultimately totaling almost $1 billion -- that Harvard in 2004 had agreed to pay if the value of the swaps fell. At least $1.8 billion of the swaps the school held were with JPMorgan, said a person familiar with the agreements. Dimon, a 1982 Harvard Business School alumnus, declined to comment on the agreements through a spokeswoman, Jennifer Zuccarelli.

Drew Faust, Harvard’s president since 2007, said she experienced some of her darkest days as she watched the collapse of U.S. markets that deepened the school’s losses.

Swaps Foray

“Someone would say that this happened, that had happened, they were going to bail out AIG or Lehman is failing,” Faust recalled in an interview, referring to the September 2008 bankruptcy of Lehman Brothers Holdings Inc. in New York and the subsequent government bailout of American International Group Inc. in New York. “We were wondering what was going to happen tomorrow.”

Harvard speculated in the swap market as early as 1994, according to rating companies’ reports. Under Jack Meyer, former chief executive of Harvard Management Co., the school’s endowment used swaps to profit from interest-rate changes. The university also used them to fix borrowing costs for capital projects.

Summers became president in July 2001, after serving as U.S. Treasury Secretary. He earned a Ph.D. in economics from Harvard, and became a tenured professor there at age 28. He served from 1991 to 1993 as chief economist at the World Bank, which initiated the first interest-rate swap with International Business Machines Corp. in 1981.

Feeling Flush

In the 1990s, Harvard began amassing 220 acres (89 hectares) for construction near Harvard Business School and its football stadium, located in Allston. In June 2005, Summers unveiled his vision for a campus expansion replete with new laboratories, dormitories and classrooms, renovated bridges and a pedestrian tunnel beneath the water. The Allston project was to transform an industrial and working-class neighborhood of two-family wood homes and small shops by building two 500,000-square-foot (46,000-square-meter) science complexes and a redrawn street grid.

Harvard was flush at the time, with an endowment of $22.6 billion that had returned an average of 16 percent during the previous 10 fiscal years. Summers told Faculty of Arts & Sciences professors in May 2004 that he hoped they wouldn't be "preoccupied with the constraints imposed by resources, for Harvard was fortunate to have many deeply loyal friends," according to minutes of a faculty meeting.

"Harvard would be able to generate adequate resources," according to the minutes. "The only real limitation faced by the Faculty was the limit of its imagination."

Forward Swaps

When the plan was made public in 2005, Harvard's financial team had been busy for more than a year behind the scenes, devising a financing strategy for the project using interest- rate swaps. These derivatives enable borrowers to exchange their periodic interest payments. They typically involve the exchange of variable-rate payments on a set amount of money for another borrower's fixed-rate payments.

In 2004, Harvard used swaps for $2.3 billion it planned to start borrowing four years later. The AAA-rated school would have paid an annual average rate of 4.72 percent if it had borrowed all the money for 30 years in December 2004, according to data from Municipal Market Advisors. The swaps let it secure a similar rate for bonds it planned to sell as it constructed the campus expansion during the next two decades.

'Relatively Rare'

The agreements were so-called forward swaps, providing a fixed rate before the bonds were actually sold. Harvard was betting in 2004 that interest rates would rise by the time it needed to borrow. The school was also assuming the expansion would proceed on the schedule set by Summers and his advisers.

While the university could have paid banks for options on the borrowing rates, the swaps required no money up front.

That time frame, along with the size of the position, was unusual, said Peter Shapiro, an adviser at Swap Financial Group Inc. in South Orange, New Jersey.

"There have been lots of forward swaps, but out longer than three years is relatively rare," Shapiro said in

a telephone interview. That duration increases the risk, because the longer the term of the contract, the more volatile the value of the swap, he said.

Columbia University is breaking ground on a $6.5 billion expansion in New York City, and last year used an interest-rate swap for its borrowing of $113 million of bonds sold seven months later. Yale University in New Haven, Connecticut, is also AAA-rated. It had 32 separate swap agreements totaling $975 million as of Oct. 31, hedging the school's $1.4 billion variable rate debt and commercial paper, according to Moody's Investors Service Inc.

Corporate Strategies

Corporations might use derivatives to lower their borrowing costs as many as four years before a bond sale, according to bankers who sell derivatives. Anadarko Petroleum Corp. used the swap market in December 2008 and January 2009 to secure rates for $3 billion it plans to refinance in October 2011 and October 2012, according to the Houston, Texas-based company's third- quarter report from Nov. 3. Matt Carmichael, a company spokesman, declined to comment.

Rothenberg, a Harvard College and Harvard Business School graduate, said he was among the key players involved in developing the financing strategy. His Los Angeles-based company, Capital Group, operates American Funds, the second-biggest family of stock and bond mutual funds in the U.S. He had been Harvard's treasurer for six months when the school arranged the Allston swaps in December 2004.

Berman's Role

Ann Berman, Harvard's chief financial officer at the time, also played a role in developing the plan, Rothenberg said. Berman declined to be interviewed. She stepped down in 2006 when she was named an adviser to the president, according to the school's Web site. A certified public accountant, Berman got her master's in business administration at the University of Pennsylvania's Wharton School of Business in Philadelphia and had earlier served as a financial planner and adviser for Harvard's dean of the Faculty of Arts & Sciences.

Other members of Harvard Corp. in 2004 and 2005, who served with Summers and Rothenberg, were former U.S. Treasury Secretary Robert Rubin, Summers's previous boss and predecessor at the U.S. Treasury, who was an instrumental supporter of his bid for the Harvard presidency; Robert D. Reischauer, former director of the Congressional Budget Office, who was a colleague of Summers and Rubin's in Washington; Conrad K. Harper, a lawyer at Simpson Thacher & Bartlett LLP in New York; Hanna Gray, former president of the University of Chicago; and James R. Houghton, chairman of Corning Inc., the world's biggest maker of glass for flat-panel televisions, in Corning, New York.

All except Rothenberg declined to comment or didn't return telephone calls.

JPMorgan's Role

Harvard University's finance staff worked with JPMorgan to develop the size and the length of the forward-swap agreements, said a person familiar with the contracts. Final negotiations to set the rates were left to Harvard Management, which oversees the endowment, because it had swap contracts in place with JPMorgan dating back to 1996 that set terms for the agreements, according to a copy of the agreement obtained by Bloomberg News.

The original swap contract between Harvard Management and JPMorgan was approved by Michael

Pradko, the endowment's risk manager, the copy shows. Pradko left Harvard Management in 2005, along with Jack Meyer, the endowment's head, to join Convexity Capital Management LP in Boston, the hedge fund Meyer started. Pradko declined to comment.

Impeccable Timing?

When Harvard Management completed its swap contracts for the school, the timing was encouraging. U.S. Federal Reserve Chairman Alan Greenspan had just begun raising the overnight target rate as the economy rebounded from the bursting of the technology bubble. In the second half of 2004, he lifted it to 2.25 percent from 1 percent.

For more than 20 years, investment banks such as Goldman Sachs Group Inc., JPMorgan, and Citigroup Inc., all based in New York, have been selling swaps as a way for schools, towns and nonprofits to reduce interest costs and protect against rising interest payments on variable-rate debt. The swap agreements can be terminated if either the bank or the issuer is willing to pay a fee, which varies with interest rates.

"Swaps have become widely accepted by the rating agencies as an appropriate financial tool," according to a slide entitled "Swaps Can Be Beneficial" that was used in a 2007 Citigroup presentation to the Florida Government Finance Officers Association. Debt issuers can "easily unwind the swap for a market-based termination payment/receipt," the slide said.

Posting Collateral

Rothenberg said officials throughout Harvard were monitoring the school's swap position, including members of the financial office, the budget office, the controller's office and Harvard Management. Although the contracts required Harvard to post collateral, or set aside cash when the values reached certain thresholds, such provisions weren't unusual, Rothenberg said in an e-mail.

"I think there are lots of swaps with collateral postings," Rothenberg said. "From fiscal years 2005 through 2008, these swaps were in place and there were collateral postings. It was not a pressing concern for the University, even though you can look at the financial statements and see that there was at least an unrealized loss in certain years.

"I think the unusual nature of these swaps were two things," Rothenberg said. "One, they were large, but the anticipated capital spending program was large; and two, they were longer-dated than most people are used to thinking about, because the capital spending program was expected to last over a number of years. The problem resulted from the rapid meltdown in the markets, which culminated in November when short-term interest rates and swaps rates collapsed."

Insufficient Oversight

After credit markets seized up in 2007, central banks worldwide pushed some bank lending rates to zero in their effort to rescue the financial system.

While Harvard Corp. is ultimately responsible for the school's financial decisions, the losses sustained by the school in almost every financial domain -- the endowment, cash account and swaps -- suggest that oversight was lax, said Harry Lewis, a Harvard alumnus, computer science professor and former dean of Harvard College.

Harvard not only lost money on the swaps last year. The value of its endowment tumbled a record 30 percent to $26 billion from its peak of $36.9 billion in June 2008, and its cash account lost $1.8 billion, according to Harvard's most recent annual report.

"They have a structural problem," Lewis said in a telephone interview. "There's something systemically wrong with Harvard Corp. It's too small, too secretive, too closed and not supported by enough eyeballs looking at the risks they are taking."

Summers Resigns

Summers's departure as president came in 2006, after he questioned women's innate aptitude for math and science. Summers apologized formally and repeatedly for the remarks made in a speech, which he said were misconstrued, and the school said it would spend $50 million to help women succeed in science and engineering. He resigned after the faculty passed two no- confidence motions against him.

That left Faust, the Civil War historian and prize-winning author who succeeded Summers as president in July 2007, to manage the Allston plans. Faust committed to its first phase: beginning construction of a $1 billion science center that would house researchers from the Harvard Stem Cell Institute, the Harvard School of Public Health and the Wyss Institute for Biologically Inspired Engineering.

By June 2005, the value of the swaps tied to Harvard's debt was negative $460.8 million, meaning that's how much it would have to pay the banks to terminate the agreements, according to the school's annual report that year.

Financial Burden

By 2008, Harvard had 19 swap contracts on $3.5 billion of debt with JPMorgan, Goldman Sachs, New York-based Morgan Stanley, and Charlotte, North Carolina-based Bank of America Corp., including the swaps for Allston, according to a bond-ratings report by Standard & Poor's released on Jan. 18, 2008.

The swaps became a financial burden last year as their value fell and collateral postings rose. In a contract with Goldman Sachs, the school agreed to post cash if the swaps' value fell below $5 million, according to a copy obtained by Bloomberg News. The collateral postings with the banks approached $1 billion late last year as central banks slashed their target rates, according to people familiar with the situation.

Michael Duvally, a spokesman for Goldman Sachs, Mary Claire Delaney, a spokeswoman for Morgan Stanley and Kerrie McHugh, a spokeswoman for Bank of America, all declined to comment.

Bigger Scale

Harvard wasn't alone in being forced to set aside cash last year to meet such margin calls. The difference was the scale.

Cornell University in Ithaca, New York, posted $38 million of collateral on $1.5 billion of swaps, according to a Moody's report on the Ivy League School. Hanover, New Hampshire-based Dartmouth College, also in the Ivy League, didn't post collateral on their swaps because their investment banks agreed to waive the requirement to win the business, according to a person familiar with the contracts. The Ivy League is a group of eight elite schools in the northeast U.S., including Harvard.

After a year during which central banks provided an unprecedented amount of money to rescue financial institutions, the credit markets unraveled along with the stock market in September 2008. Lehman Brothers filed the largest bankruptcy in history on Sept. 15. Two weeks later, the House of Representatives rejected a $700 billion bailout plan, sending the Dow Jones Industrial Average down 778 points, its biggest point drop ever.

Plunging Value

The value of Harvard's swaps plunged and its need for cash soared. Under contracts signed in 2004, Harvard had to post larger and larger amounts of collateral to cover the negative value of the swaps; the total amount would approach $1 billion.

At the same time, the usual sources the university relied on to generate cash -- the endowment and its operating cash account -- were hemorrhaging. The school's endowment tumbled, losing 22 percent from July 2008 through October 2008.

The Harvard endowment had more than 50 percent of its assets allocated to private equity, hedge funds and other hard- to-sell assets. The university already had borrowed to amplify gains, with leverage targeted at 3 percent of assets as of last year. When Jane Mendillo took over as chief executive officer of Harvard Management on July 1 last year, one of her top priorities was to raise cash. The school couldn't get acceptable prices from the $1.5 billion of private equity stakes Mendillo tried to sell.

Liquidity Crisis

Outside managers investing Harvard's endowment were either performing poorly or preventing Harvard from withdrawing cash. Citigroup CEO Vikram Pandit shut down Old Lane Partners in June 2008. Ospraie Management, in New York, closed its biggest hedge fund in September and Farallon Capital Management, in San Francisco, put up a so-called gate, prohibiting clients from taking out cash.

Making matters worse, Harvard disclosed Oct. 16 that its checkbook fund, the general operating account, lost $1.8 billion in the year ended June 30. Lumping the cash account with the endowment was risky, said Louis Morrell, who managed the endowment for Radcliffe College, which is part of Harvard, until 1990.

"They put the operating funds in the endowment --it's like the guy who has his retirement income in company stock," said Morrell, who is also the former treasurer of Wake Forest University in Winston-Salem, North Carolina.

Borrowing Money

Rothenberg, Mendillo and Daniel Shore, Harvard's chief financial officer, decided last year as the credit crisis deepened that the school needed to borrow money.

It was at this point, in October, that Harvard officials contacted Ogilby, their bond lawyer at Ropes & Gray LLP in Boston. A 1980 Harvard College graduate, Ogilby is head of the firm's Public Finance Group. E-mails show that Craig McCurley, the director of Harvard's treasury management office, and his associate director, Tom Balish, contacted Ogilby, who in turn reached out to the Massachusetts Health & Educational Facilities Authority, which sells bonds for the state's nonprofits. Ogilby declined to comment.

Harvard needed cash to pay bills, refinance outstanding debt and break its money-losing swap agreements, according to a series of e-mails beginning on Oct. 31 last year between Ogilby and staff

members of the state authority that were obtained by Bloomberg News. School officials asked whether the agency could omit from a public hearing that some of the bonds would finance swap termination payments.

'Timely Information'

"There is some sensitivity at Harvard about not specifically flagging the swap interest unwind payments," Ogilby wrote on Nov. 12 to Deborah Boyce, an analyst at the authority. "They still would like the ability to finance them, but would prefer to delete those references if they can do so."

Benson Caswell, the bond authority's executive director responded Nov. 13 that the swap agreements would have to be identified and that the authority needed "timely, accurate and unfiltered information, including a balanced presentation," from issuers. Harvard disclosed the use of the bond proceeds, and only wanted to avoid telegraphing potential activity in the swap market, said Christine Heenan, a school spokeswoman.

"The spirit of our inquiry was whether prematurely disclosing plans for what are inherently market transactions would in any way jeopardize the execution of those transactions," she said in an e-mail.

Not Special

At its Nov. 13 monthly meeting in Boston's financial district, the agency's seven-member board approved a Harvard bond issue of up to $2.5 billion, about the amount of debt it sells for all schools and borrowers in a typical year. The board usually takes two meetings to approve a bond sale. In Harvard's case it took just one meeting.

"I can assure you that Harvard doesn't get any special treatment," Caswell said. "Other borrowers have received the same service."

Caswell said one board member, Marvin Gordon, is a Harvard graduate and that as long as there is no conflict of interest between his business and the use of the bond proceeds, a board member may vote on approval of a bond sale.

Gordon said while he didn't have a conflict in voting to approve Harvard's bond issue, "they never should have been in the position where they had to get out" of the swaps.

Harvard unwound the swaps at possibly the worst moment in the history of financial markets, said Shapiro, the municipal swap adviser. Just as Harvard's request for approval to sell tax-exempt bonds arrived in the state offices, the swap market began sliding, according to Bloomberg data. While the school waited for permission to raise money, the price to break the swap agreements escalated.

Tumbling Index

On Nov. 13, the index used to value the agreements, the U.S. dollar 30-year swap rate, closed at 4.247 percent. By the time Harvard held its bond sale Dec. 8, the swap index had tumbled to 2.7575 percent. Harvard exited three of its swaps tied to $431 million debt on Dec. 9, when the benchmark fell again to 2.6885 percent. The interest-rate swap market reached a record low of 2.363 percent on Dec. 18.

Harvard's decision to borrow money came at a time when the difference, or spread, between yields on corporate and U.S. Treasury securities was the widest since at least 1990, according to data from

Barclays Plc. That meant AAA-rated Harvard was selling bonds when the market was demanding the biggest premium in at least 18 years.

“December 2008 was, by an enormous amount, the worst time in history” to terminate the swaps by borrowing money, said Shapiro.

Harvard’s Payments

Harvard sold $1.5 billion of taxable and $1 billion of tax- exempt bonds, using $497.6 million of the proceeds to pay investment banks to extract itself from $1.1 billion of interest-rate swaps, according to its annual report released Oct. 16. Separately, the school agreed to pay another $425 million over 30 years to 40 years to the banks to terminate an additional $764 million of the swaps, Harvard’s Shore said.

The school on Dec. 12 paid JPMorgan $34.5 million from the tax-exempt bond proceeds to unwind a swap tied to $205.9 million of variable-rate bonds it sold for capital projects, according to documents obtained from the Massachusetts financing authority. It also paid Goldman Sachs $41.6 million on Dec. 9 and $23.2 million on Dec. 11 to end agreements on another $226.8 million of existing debt. Harvard didn’t disclose recipients of the other termination payments because it paid them from the taxable bonds.

Not ‘Ideal’

The timing was “less than ideal, but the surrounding context was less than ideal as well,” said Shore.

Harvard and JPMorgan celebrated the bond issue by hosting a cocktails-and-dinner party at the French restaurant Mistral, in Boston’s South End neighborhood, where appetizers start at $15 and entrees cost about $40, according to e-mails obtained from the state finance agency. JPMorgan invoiced the agency $388.78 for three employees who attended: Caswell, Marietta Joseph and Danielle Manning.

Since then, some of the values in the swap market have recovered to their levels of December 2004 when Harvard signed the forward contracts.

“If Harvard had waited, the cost of terminating may well have been lower, but they weren’t willing to take that risk,” said Matt Fabian, managing director at Municipal Market Advisors in Westport, Connecticut.

No Choice

Shore said that he, Mendillo and “a lot of us in senior management” contributed to the decision to break the swap agreements. That group included Ed Forst, the former executive vice president, who returned to Goldman Sachs after less than a year at Harvard, Shore said. Shore also cited Harvard Corp.’s role as bearing the school’s ultimate fiduciary responsibility. Forst didn’t return calls seeking comment.

Waiting didn’t appear to be an option at the time, Shore said.

“In evaluating our liquidity position, we wanted to get ourselves some stability and some safety,” he said in an Oct. 16 interview this year at Harvard. “It was to take the losses now rather than run the risk of having further losses if we continued to hold on to the positions.”

No one expected the indexes used for valuing swaps to fall as fast and as much as they did, said Chris Cowen, managing director of Prager, Sealy & Co. in San Francisco.

“What we ended up with was an outlier event,” said Cowen, who advised Harvard as it unwound its position last year. “I was taken by surprise by the falling rates.”

Spending Cuts

Harvard, in the meantime, has cut its capital spending estimate for the next four years in half to about $2 billion. Before the credit crisis, it planned on spending $10 billion over a decade on capital projects, including Allston. Faust is building a team to study “financially and structurally” how Harvard can expand, and holds regular monthly meetings with top financial advisers, including Mendillo, to guard against future financial catastrophes, she said in an e-mail announcing the work stoppage in Allston.

Summers, along with Rubin and Greenspan opposed the U.S. Commodity Futures Trading Commission’s attempt in 1998 to regulate so-called over-the- counter derivatives, which included agreements like interest rate swaps. At the time, Summers was Rubin’s deputy secretary.

Now Summers is leading the Obama administration’s effort to write stricter rules for the derivatives market “to protect the American people,” he said in October at a conference in New York sponsored by The Economist magazine.

Universities would have been better served if they had stayed away from the more complicated financial instruments being sold by Wall Street, said David Kaiser, a Harvard class of 1969 alumnus who has been critical of the high salaries paid to managers of the school’s endowment.

Bank Strategy

“They used many of the investment strategies of the big banks and hedge funds, and when things went badly they could not get a bailout,” said Kaiser, a history professor at the U.S. Naval War College in Newport, Rhode Island. “It would clearly be better for any nonprofit on whom many people depend to pursue safer, more stable strategies.”

Pennsylvania State Auditor General Jack Wagner said Nov. 18 that the state should ban local governments from entering into derivative contracts tied to bond issues, a practice he termed “gambling” with taxpayer funds.

Harvard might have considered it a conservative step to lock in rates when they were low, said Shapiro, the New Jersey- based swap adviser.

“You can be very big and very rich and very smart and still get things wrong,” Shapiro said.

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