



SOHN INVESTMENT CONFERENCE

DAVID EINHORN

April 23, 2018



This is the presentation David gave at the Sohn Investment Conference on Monday, April 23, 2018.

Assured Guaranty (AGO) issued a press release that night, without having yet seen our presentation.

AGO said that Greenlight demonstrated a “fundamental lack of understanding of [AGO’s] business model.” Further, it stated that scheduled shortfall principal and interest payments do not accelerate and it does not face liquidity risks. Notably AGO said, “Mr. Einhorn’s focus on total debt service ignores this lack of acceleration.”

In fact, we agree that payments don’t accelerate and the company does not face near-term liquidity risks – we never said that.

We very much understand AGO’s business model and stand by our analysis.

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The information contained within the body of this presentation is supplemented by endnotes which identify Greenlight's sources, assumptions, estimates, and calculations. This information contained herein should be reviewed in conjunction with the endnotes.

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I'd like to remind everyone that the idea I'm about to present is an existing position in our portfolio. We may close out our position at any time.

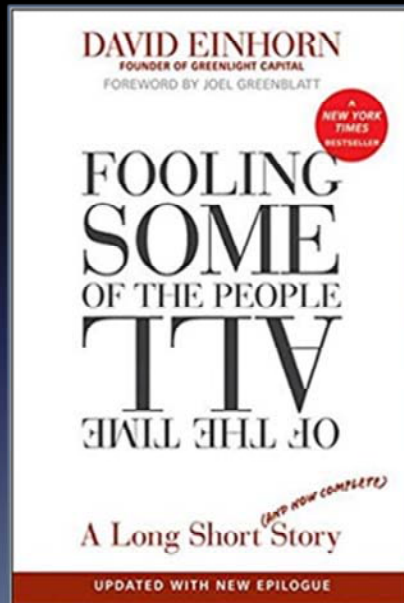
A long time AGO...



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I first spoke at Sohn in 2002 and shared a short idea of a mid sized financial institution that most of you had not heard of. Allied Capital had serious problems. It had large losses it refused to account for. It had invented its own proprietary grading system that helped it hide its losses. It fooled its auditors, who were asleep, and it fooled investors by aggressively returning large amounts of capital that it didn't really earn.

History repeats



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If you weren't there or don't remember, it's all written down here.

In any case, today I am going to present another short of a mid-sized financial institution most of you haven't heard of, with serious problems including losses it hasn't accounted for, that has created its own proprietary grading system which helps hide the losses. It has fooled its sleepy auditors and regulators, and it lures investors by aggressively returning capital that it doesn't earn.

This time, I hope I won't have to write a book about it.

A melting ice cube



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Our idea today is Assured Guarantee, or AGO.

It is a melting ice cube that is paying out the drops while it still can. When regulators, auditors or rating agencies figure them out, I doubt there will be many more drops left for shareholders.

AGO is a bond insurer.

Bond insurers



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Bond insurance, or “financial guarantee insurance”, is where an insurance company guarantees interest and principal payments when bonds default.

Starting in 1971, AMBAC insured municipal bonds. Rating agencies gave municipal bonds lower ratings than corporate bonds with the same risk, which raised borrowing costs.

Bond insurers arbitrated the ratings. Once insured by a AAA rated bond insurer, the muni bonds automatically became AAA, which reduced the borrowing cost. In effect, the bond insurers split the savings with the municipality.

Image used with permission of www.cartoonstock.com.

“Zero-loss” insurance



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Bond insurers prospered for over 25 years, because municipal bonds almost never default. Even when municipalities defaulted, the bond insurers would usually recoup any paid claims. Hence: the term “zero-loss” insurance.

Business Week called municipal bond insurance “an almost perfect money machine.”

Alas, all good stories must come to an end...

Image used with permission of www.cartoonstock.com.

Bubbles do pop (or they used to)



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Almost perfect money machines attract competition, which caused the bond insurers to look for other ways to grow, starting with lower-rated municipalities, followed by corporate bonds and eventually structured finance. Risk taking accelerated and culminated with a pop in 2008.

Most bond insurers, including the leaders, MBIA and AMBAC, crashed. Once they suffered ratings downgrades they couldn't write new business and went into run-off.

John Deering Editorial Cartoon is used with the permission of John Deering and Creators Syndicate. All rights reserved.

Ratings based on ability to pay

The image shows the cover of a report from Moody's Investors Service. At the top left, it says 'MARCH 2010'. At the top right, it says 'U.S. PUBLIC FINANCE'. The Moody's logo is prominently displayed in the center. Below the logo, the title 'Recalibration of Moody's U.S. Municipal Ratings to its Global Rating Scale' is written. To the left of the title, there is a section titled 'RATING IMPLEMENTATION GUIDANCE'. Below this, there is a 'Table of Contents' with the following items: 'OVERVIEW' (page 1), 'RECALIBRATION TO THE GLOBAL SCALE WILL OCCUR IN STAGES' (page 3), and 'RECALIBRATION GUIDED BY' (page 3). To the right of the title, there is an 'Overview' section. The text in the Overview section reads: 'Beginning in April 2010, Moody's plans to recalibrate its long-term U.S. municipal ratings to its global rating scale. The global rating scale is used to rate sovereign, sub-sovereign, financial institution, project finance, structured finance and corporate obligations. This'.

MARCH 2010

U.S. PUBLIC FINANCE

MOODY'S
INVESTORS SERVICE

RATING
IMPLEMENTATION
GUIDANCE

Recalibration of Moody's U.S. Municipal
Ratings to its Global Rating Scale

Table of Contents:

OVERVIEW 1
RECALIBRATION TO THE GLOBAL SCALE
WILL OCCUR IN STAGES 3
RECALIBRATION GUIDED BY

Overview

Beginning in April 2010, Moody's plans to recalibrate its long-term U.S. municipal ratings to its global rating scale. The global rating scale is used to rate sovereign, sub-sovereign, financial institution, project finance, structured finance and corporate obligations. This

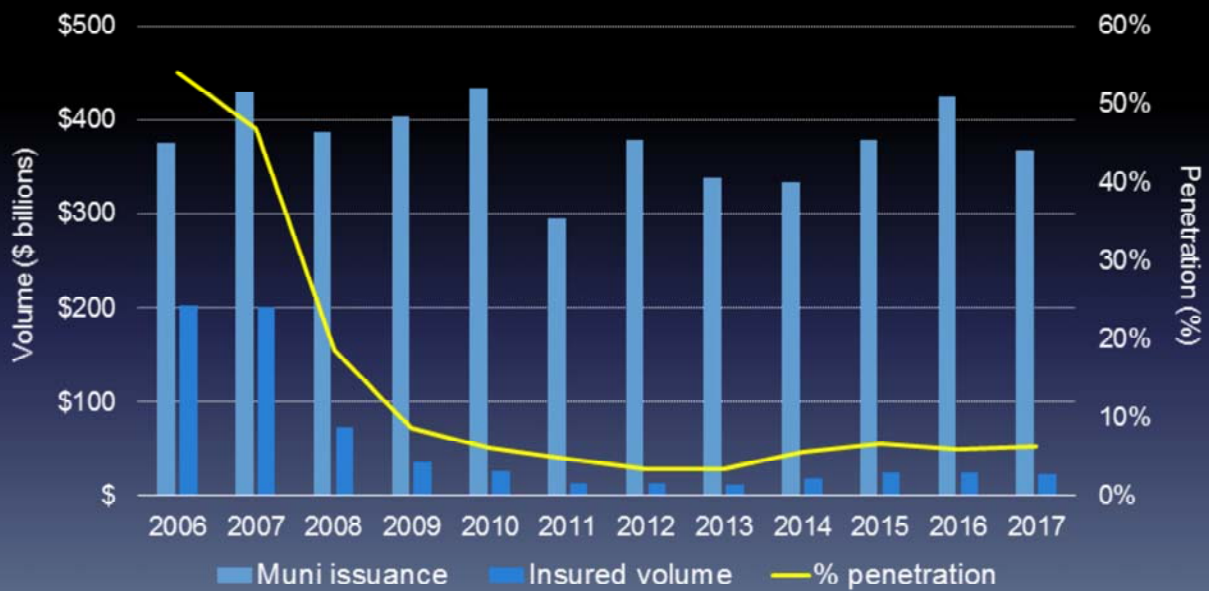
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Post crisis the agencies admitted they had under-rated municipal bonds and re-scaled the ratings to match corporate bonds. This effectively ended the rating arbitrage and the opportunity to insure a large number of new municipal bonds.

In 2015 the SEC made it official by requiring rating agencies to weigh credit default risk in a consistent manner for all securities.

Source: Moody's Investors Service, *Moody's US Municipal Ratings to Move to Global Scale Beginning April*; March 16, 2010; available at www.moody's.com/research/Moodys-US-Municipal-Ratings-to-Move-to-Global-Scale-Beginning--PR_196360

Muni wraps ain't coming back



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Pre-crisis about half of new munis were insured. With the rating scale corrected and no AAA rated bond insurers left, the arbitrage is nearly gone and insurance is purchased less often.

Source: Dowling & Partners Securities LLC, received April 2018.

Assured Guaranty (AGO)



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Assured Guaranty is one of the few survivors.

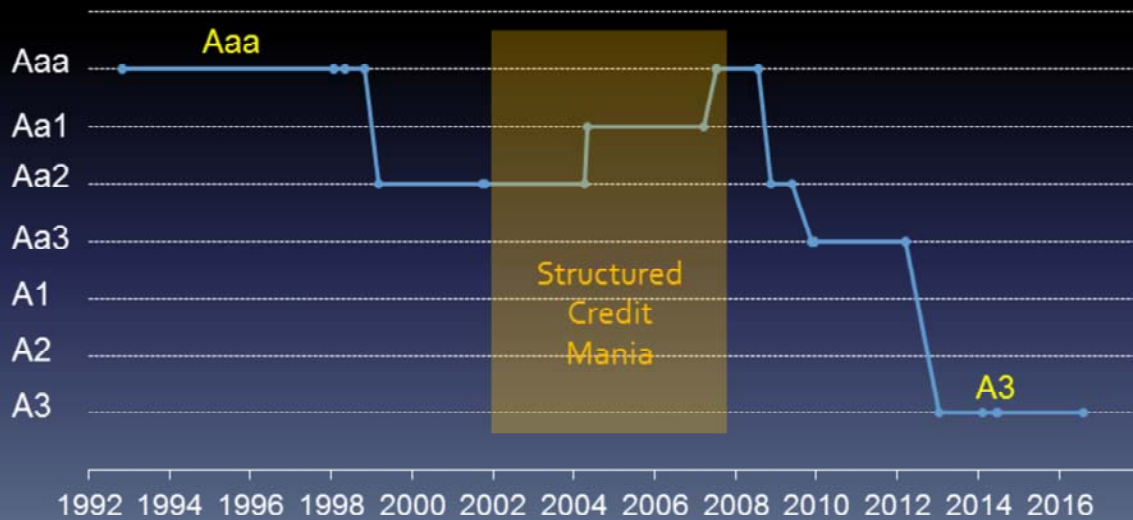
AGO was part of ACE starting in 1988 and went public in 2004.

Unlike MBIA and AMBAC, AGO survived the financial crisis relatively unscathed.

Source: Bloomberg LP, retrieved April 20, 2018.

A Weeble

Assured Guaranty Corp. (AGC) Moody's Rating



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AGO started Triple-A but Moody's downgraded it in 1999 due to industry competition. This probably saved the company because without a Triple-A rating from both S&P and Moody's during the peak of the structured credit mania, it couldn't compete and wrote less bad business guaranteeing the toxic CDOs that brought down most bond insurers.

After the financial crisis, AGO wobbled but didn't fall down.

Source: Moody's Investors Service rating of Assured Guaranty Corp (AGC), retrieved April 2018. AGC is a wholly owned subsidiary of AGO which underwrites guarantees for municipal bonds and infrastructure transactions.

Blame the banks

2009-2016	Total (\$M)
Claims paid on U.S. RMBS	(\$5,087)
Reps & Warranties recovery	\$3,670
Claims paid after R&W recovery	(\$1,417)

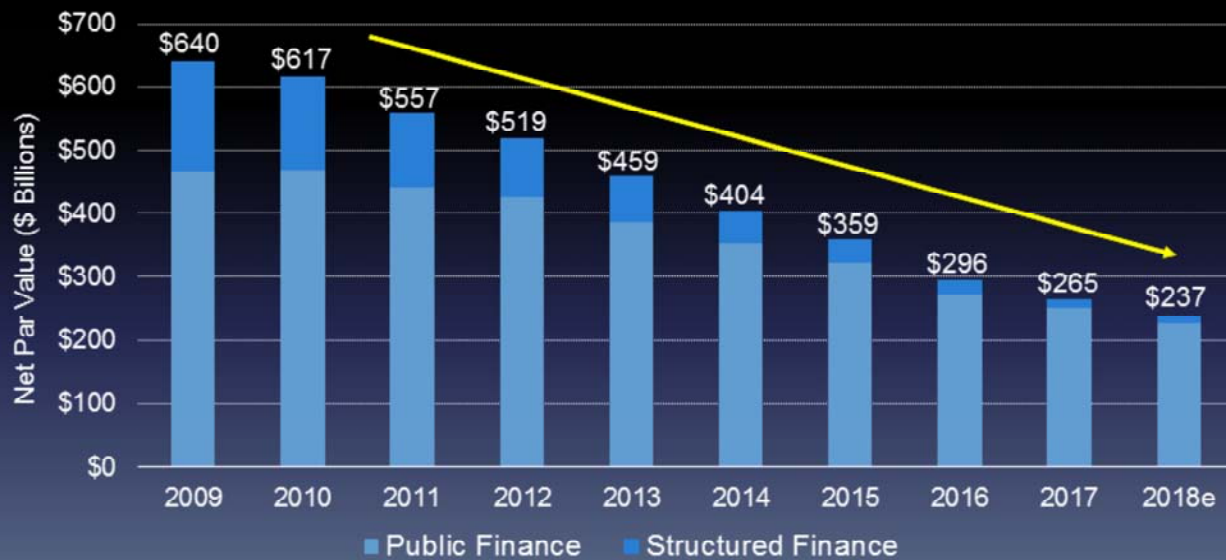
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AGO did have some structured finance business and has paid out \$5.1 billion of losses.

However, when the dust settled AGO was able to recover over 70% of its losses by suing the banks who sponsored the deals for fraud.

Source: AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>, and Greenlight calculations.

A little bit smaller now...



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Since the financial crisis, a majority of AGOs structured finance exposure has been resolved and the overall book has shrunk.

New business production is not expected to fully replace the amortization of the existing portfolio, and the ice cube will continue to melt.

Source: AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>, and Greenlight calculations.



AGO is no longer rated AAA, but S&P gives it an AA rating and Moody's rates it the equivalent to A-.

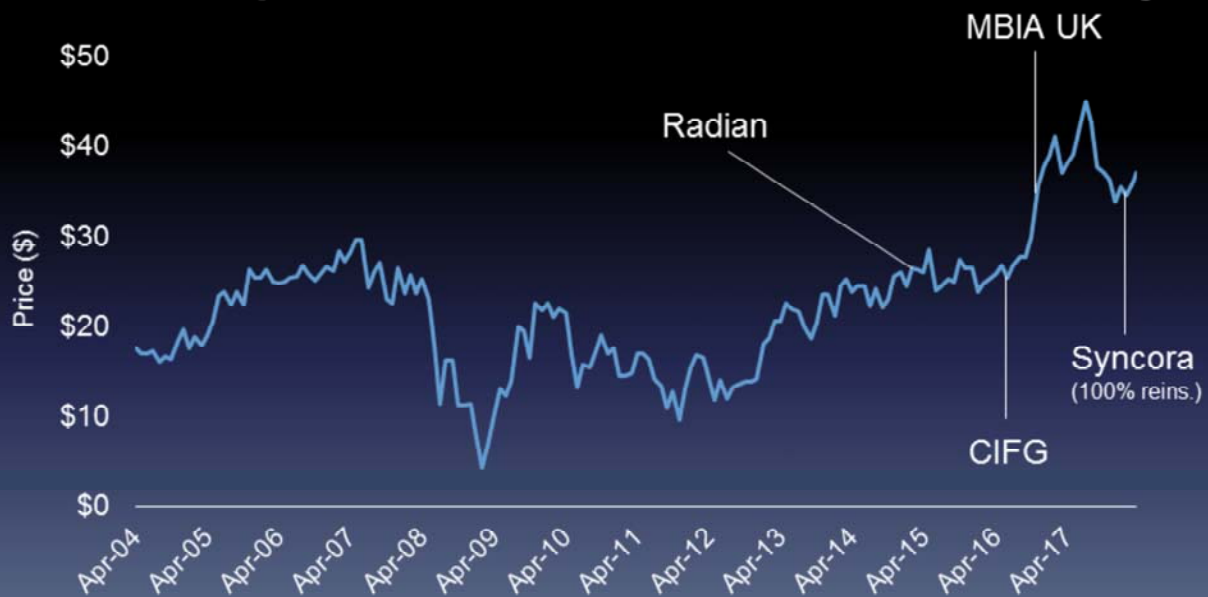
The company responded to Moody's by asking it to withdraw the rating, saying it disagrees with Moody's methodology.

According to the company, it thinks it can write new business as long as it keeps its S&P rating.

Source: Ratings information for AGC from Moody's Investors Service and S&P. AGC is a wholly owned subsidiary of AGO which underwrites guarantees for municipal bonds and infrastructure transactions. Withdrawal request is from AGO Q4 2017 earnings call.

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Ice chips combined make a slushy



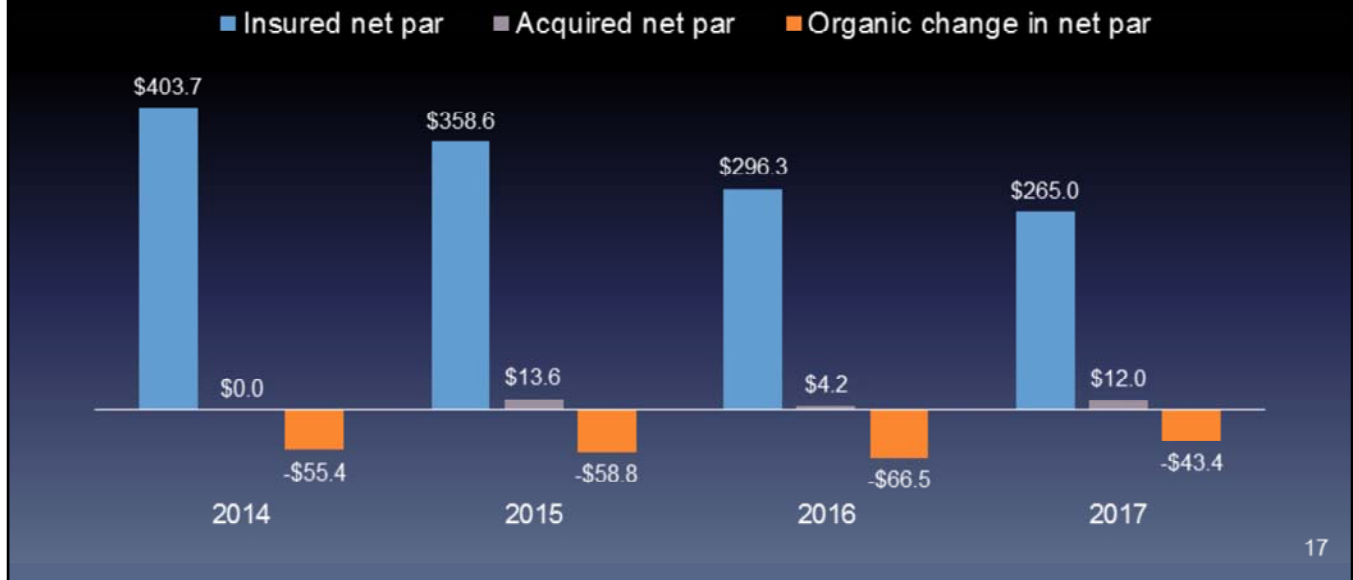
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Post crisis, AGO has bought or reinsured most of its competitors, including Radian, CIFG, MBIA's UK division and Syncora.

This has mitigated some of the decline...

Source: Pricing from Bloomberg LP, retrieved April 20, 2018. Acquisitions and reinsurance from AGO Forms 8-K and earnings calls, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>.

Sisyphus is losing



...but even consolidation hasn't stopped the business from shrinking.

The amortization of its old business is greater than the acquired plus new business.

Source: AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>, and Greenlight calculations.

The recovery years

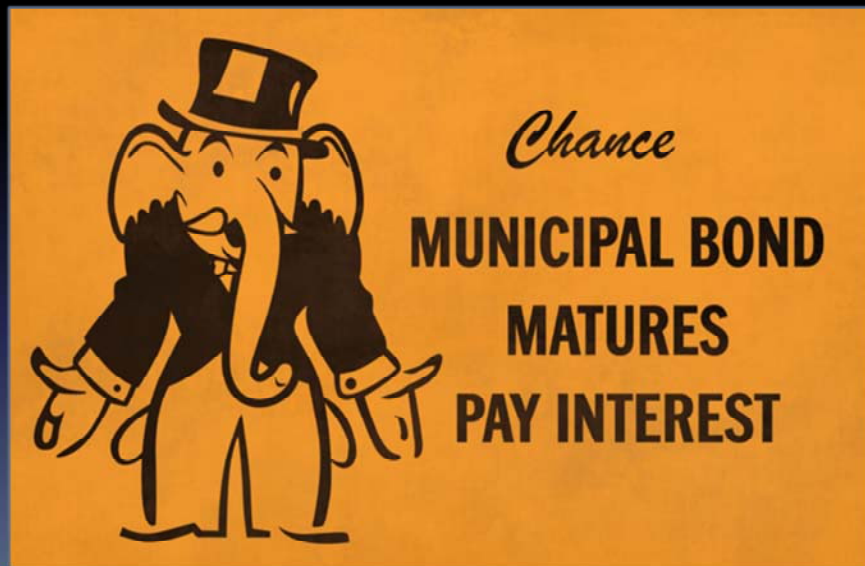
(\$ in millions)	2014	2015	2016	2017
Scheduled premium	424	433	395	404
Refunding premium	146	333	469	286
Interest income	403	423	408	418
Derivative gains	1,067	793	136	139
Legal recoveries	268	-67	-17	105
Other one-time items	14	251	298	452
Operating expenses	(220)	(231)	(245)	(244)
Interest expense	(92)	(101)	(102)	(97)
Pre-provision pre-tax income	\$2,010	\$1,834	\$1,342	\$1,463

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The recovery from the financial crisis has been good for the income statement. In addition to the legal recoveries, AGO has reversed mark-to-market losses on credit default swaps. However, looking forward, the litigation has been mostly resolved and there is little mark-to-market liability for CDS left on the balance sheet to reverse.

Source: AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>, and Greenlight calculations.

Lost revenue



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Another main revenue driver has been advanced refundings, where municipalities refinance at lower rates. When this happens AGO accelerates the unearned premium into revenue.

The new tax bill eliminated the benefit of advanced refundings. In effect, municipalities can't issue tax-free bonds to repay existing bonds.

This revenue source is also likely to diminish greatly.

Illustration: Parker Brothers.

Yesterday, seems so far away

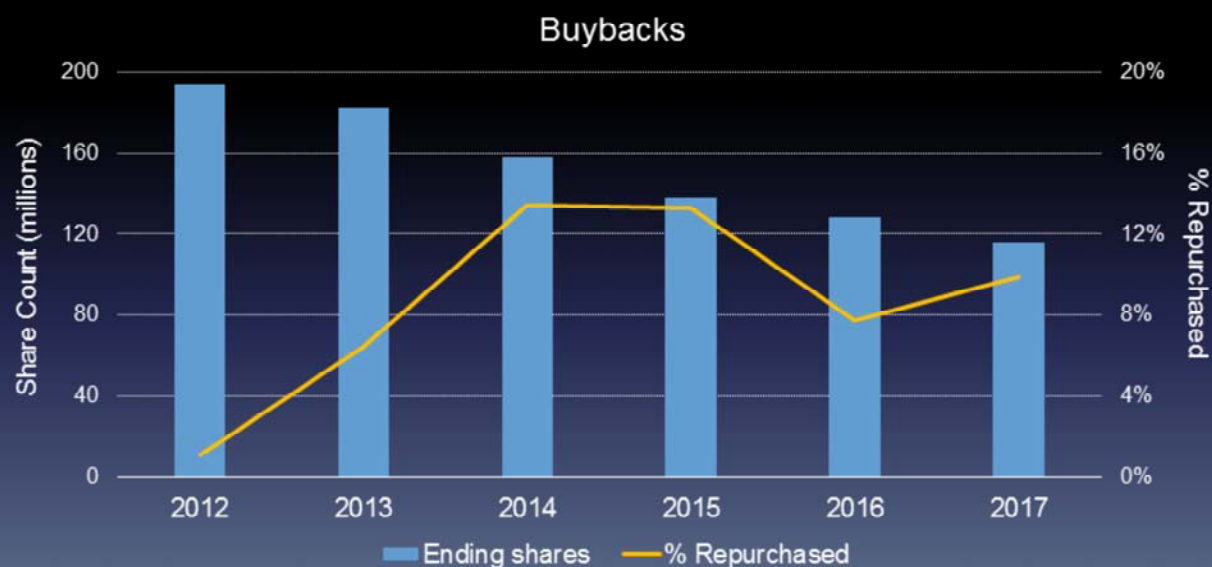
(\$ in millions)	2014	2015	2016	2017	2018e
Scheduled premium	424	433	395	404	363
Refunding premium	146	333	469	286	25
Interest income	403	423	408	418	425
Derivative gains	1,067	793	136	139	0
Legal recoveries	268	-67	-17	105	0
Other one-time items	14	251	298	452	100
Operating expenses	(220)	(231)	(245)	(244)	(225)
Interest expense	(92)	(101)	(102)	(97)	(100)
Pre-provision pre-tax income	\$2,010	\$1,834	\$1,342	\$1,463	\$588

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So, with the future lacking legal recoveries, derivative loss reversals and advanced refunding income, pre-provision pre-tax income looks likely to collapse.

Source: AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>, and Greenlight calculations. The 2018 estimates reflect Greenlight's estimates and incorporate impact of Syncora reinsurance transaction.

As the ice melts...



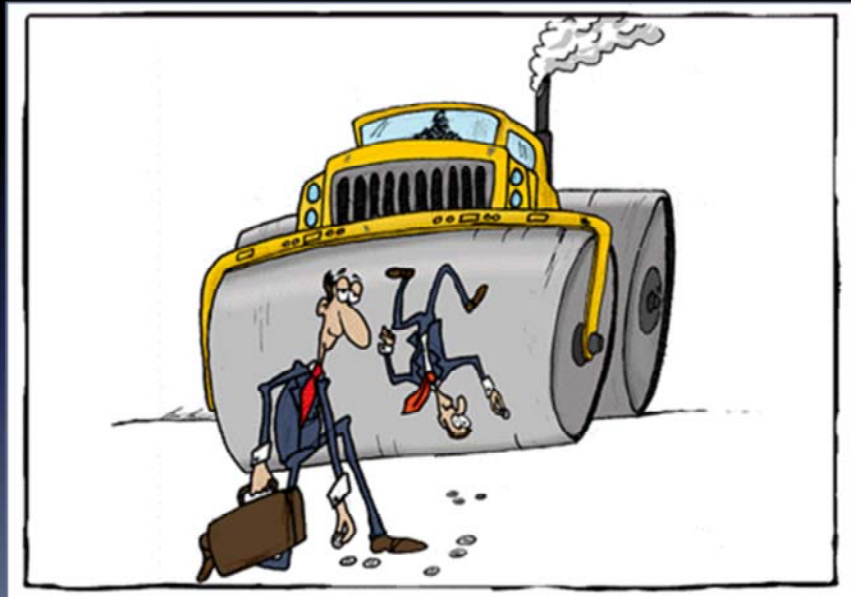
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The strong earnings and shrinking book have enabled AGO to buy back about 30% of the outstanding shares in the last 5 years.

Shrinking profits should pressure buyback capacity by next year... and that's before talking about the real problems.

Source: Bloomberg LP, retrieved April 20, 2018; AGO annual reports for years presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations.

Picking up pennies...



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The nature of the business is that for a small payment, the bond insurers guarantee large obligations that they hope to never pay out on.

No room for losses

(\$ in millions)	
Qualified statutory capital	\$6,961
Total claim paying resources	\$11,752
Net par outstanding	\$239,003
Net debt service outstanding	\$373,340
Net par / Statutory capital	34.3x
Capital ratio	53.6x
Financial resources ratio	31.8x

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This causes a lot of leverage no matter how you look at it.

AGO has \$7 billion of statutory capital and almost \$12 billion of what it calls “claims paying resources” – or money that can be used to pay claims as needed.

Against this, AGO has guaranteed \$239 billion of undefeased bonds, which balloons to \$373 billion when you count guaranteed interest payments.

Depending on how you look at it, AGO is 32-54 times levered.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>.

That's a lotta Jersey

Issuer	Net Par (\$M)	% of BV	Internal Rating	Moody's Rating
New Jersey (State of)	4,821	70%	BBB	Baa1
Southern Water Services Limited (UK)	2,567	38%	A-	Baa2
Hydro-Quebec, Province of Quebec	2,062	30%	A+	Aa2
Illinois (State of)	2,059	30%	BBB	Baa3
Societe des Autoroutes du Nord/l'Est de France	1,808	26%	BBB+	Baa1
Chicago (City of) Illinois	1,659	24%	BBB+	Ba1
Puerto Rico, General Obligation	1,578	23%	CCC-	Ca
Thames Water Utility Finance (UK)	1,519	22%	A-	A3
Pennsylvania (Commonwealth of)	1,481	22%	A-	Aa3
Anglian Water Services Financing (UK)	1,466	21%	A-	A3

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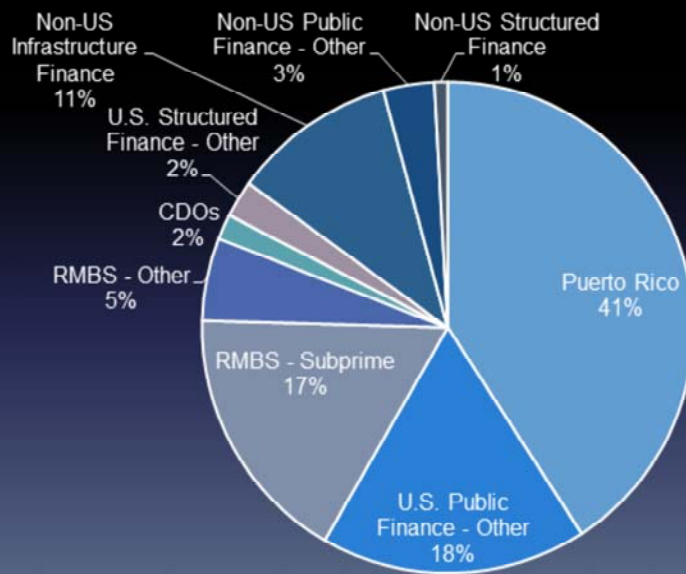
Generally, in a highly levered structure, diversification makes a lot of sense.

AGO is concentrated: Look at the top 10 insured credits.

A single impaired credit could create a significant problem. And as we'll see shortly, there is one big problem in the "here and now" and several significant problems on the horizon.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; Greenlight calculations; Moody's Investors Service; and S&P publications.

Notorious B.I.G.



Below
Investment
Grade (BIG):
\$12.2 Billion

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Not all the credits are money good. Against the \$7 billion of equity, AGO insured more than \$12 billion bonds that are now rated “below investment grade.”

None of these bonds were below investment grade at issuance, so they have all suffered substantial credit deterioration.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; Greenlight calculations.

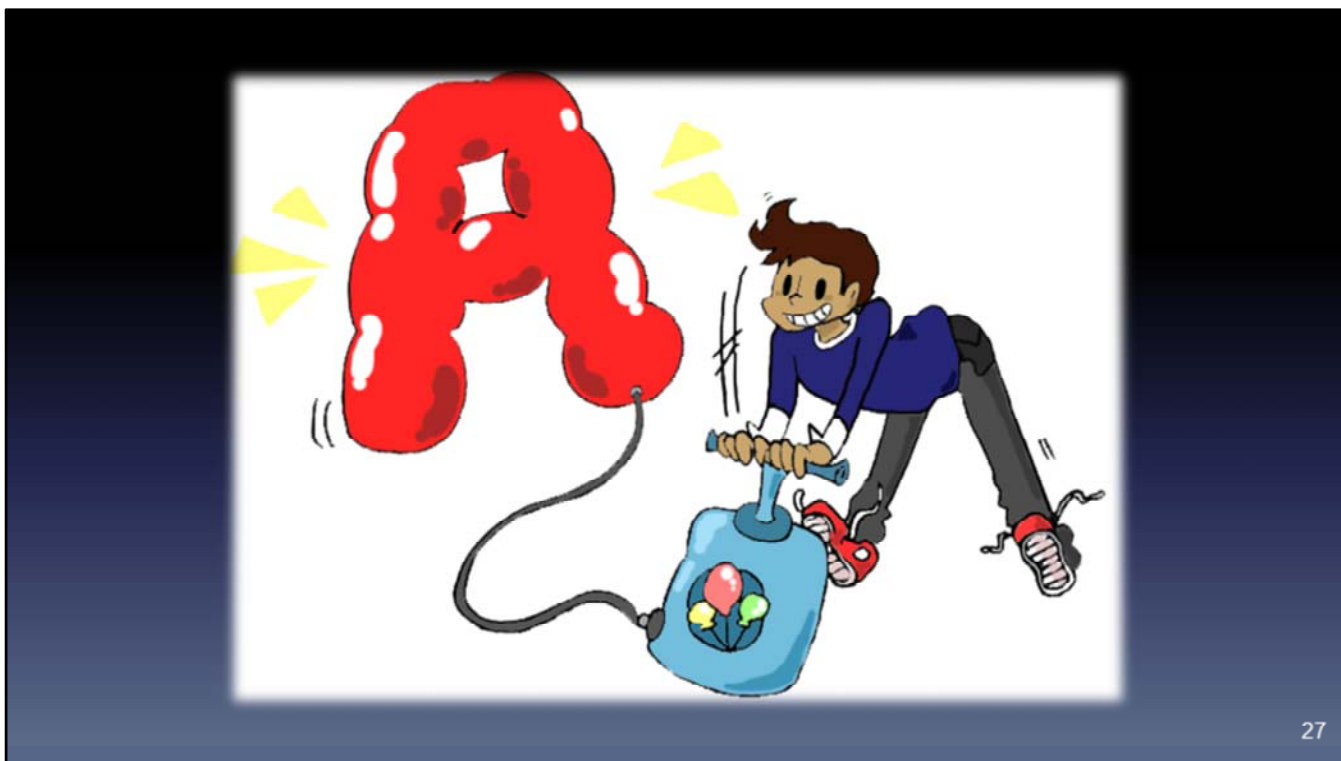
*“Unless otherwise noted, ratings on Assured Guaranty's insured portfolio and on bonds or notes purchased pursuant to loss mitigation strategies or other risk management strategies (loss mitigation securities) are **Assured Guaranty's internal ratings**. Internal credit ratings are expressed on a rating scale similar to that used by the rating agencies and generally reflect an approach similar to that employed by the rating agencies, except that Assured Guaranty's **internal credit ratings focus on future performance, rather than lifetime performance.**”*

AGO 10-K, February 23, 2018

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How much deterioration is a matter of opinion. AGO's 10-K has this strange disclosure, which says that AGO uses its own internal credit ratings, rather than third party ratings.

Source: AGO annual report available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>.



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Of course, when you self-grade there could be a bias. We compared AGO's internal ratings of its largest "below investment grade" risks with third-party credit ratings and found that AGO consistently grades them higher.

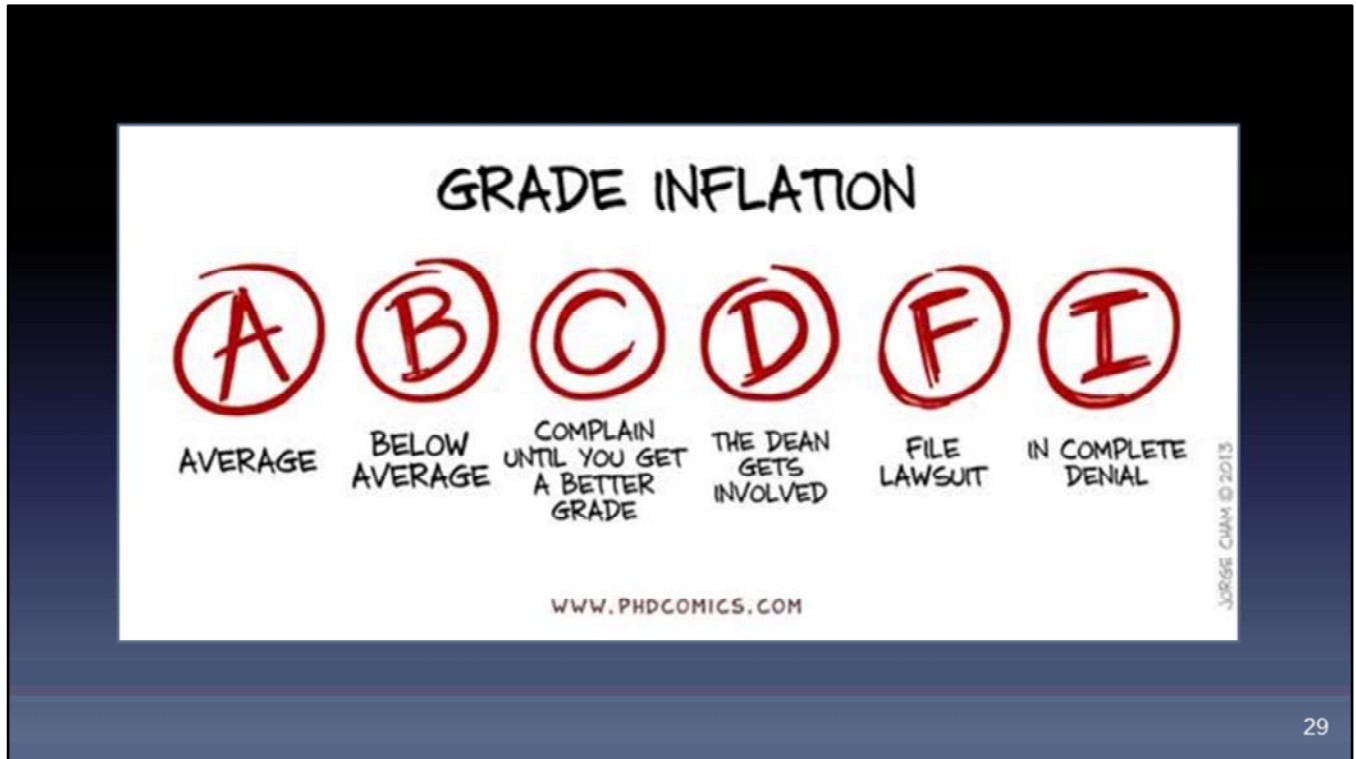
Self rating defaulted debt

Issuer	Net Par (\$M)	AGO Internal Rating	S&P	Moody's
Puerto Rico, General Obligation	1,578	CCC-	D	Ca
Puerto Rico, Highways & Transportation Auth.	1,377	CC-	D	C
Puerto Rico, Electric Power Authority	853	CC	D	Ca
Puerto Rico, Aqueduct & Sewer Authority	373	CCC	CC	Ca
Puerto Rico, Municipal Finance Agency	360	CCC-	CC	C
Puerto Rico Sales Tax Financing Corporation	272	CCC+	D	Ca
Puerto Rico Convention Center District Auth.	152	CC-	D	C

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I'd especially highlight Puerto Rican debt, which AGO says is rated CCC or CC depending on the issue, even though Puerto Rico defaulted last year and S&P and Moody's show much lower ratings.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; Greenlight calculations; Moody's Investors Service; and S&P publications.



Certainly, there must be some motivation for this grade inflation.

Image: www.phdcomics.com.

*“The Company’s loss reserve committees estimate expected loss to be paid for all contracts by reviewing analyses that consider various scenarios with corresponding probabilities assigned to them. Depending upon the nature of the risk, the Company’s view of the potential size of any loss and the information available to the Company, that analysis may be based upon individually developed cash flow models, **internal credit rating assessments**, sector-driven loss severity assumptions and/or judgmental assessments”*

AGO 10-K, February 23, 2018

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And I believe this may be one of the main reasons.

These internal credit ratings flow straight into the loss estimating process, which affects reserves and the balance sheet.

Source: AGO annual report available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>.

Expected loss to be paid

Category	Expected Loss (\$M)	Net Par (\$B)	BIG (\$M)	Expected Loss/BIG
Public Finance	1,203	252.3	8,871	13.6%
Structured Finance	100	12.6	3,367	3.0%
Total	\$1,303	\$265.0	\$12,238	10.6%

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AGO expects to pay out \$1.3 billion in claims on its entire portfolio.

This does not include a \$572 million “salvage recoverable” asset on its Balance Sheet, which AGO expects to recover against these losses. The actual “net reserve” number it quotes is only \$844 million.

Source: AGO 2017 annual report and AGO 2017 financial supplement, both available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations.



Which brings us to Puerto Rico...

Anita sings...

Puerto Rico
My heart's devotion
Let it sink back in the ocean!
Always the hurricanes blowing
Always the population growing
And the money owing ! *shrinking*

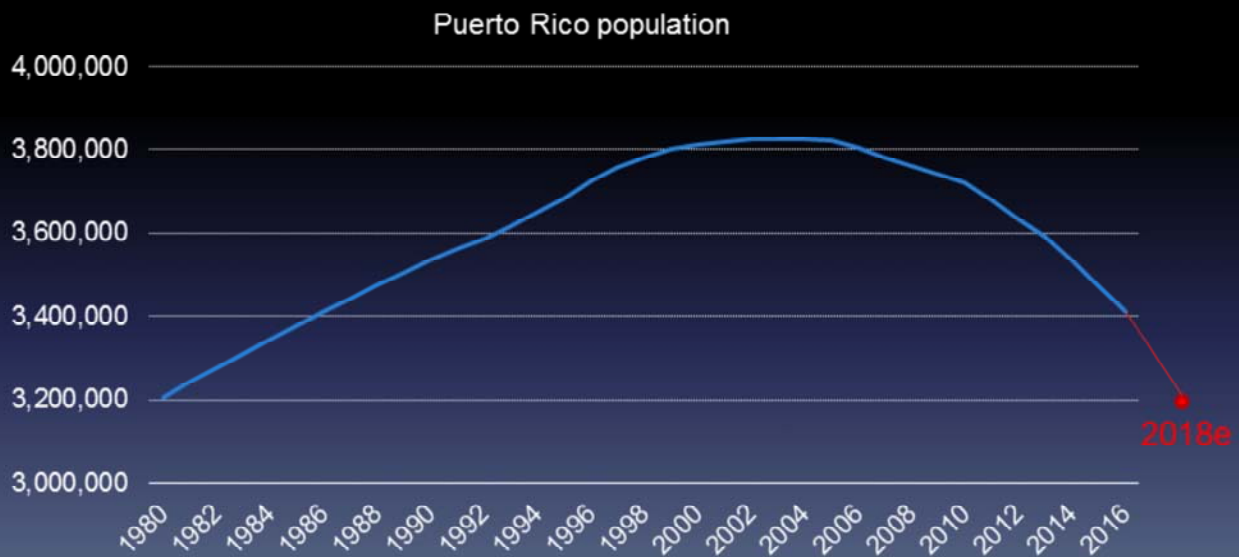


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...the wild card in the AGO story.

There is nothing new here since West Side Story... except...

Always the population growing? No



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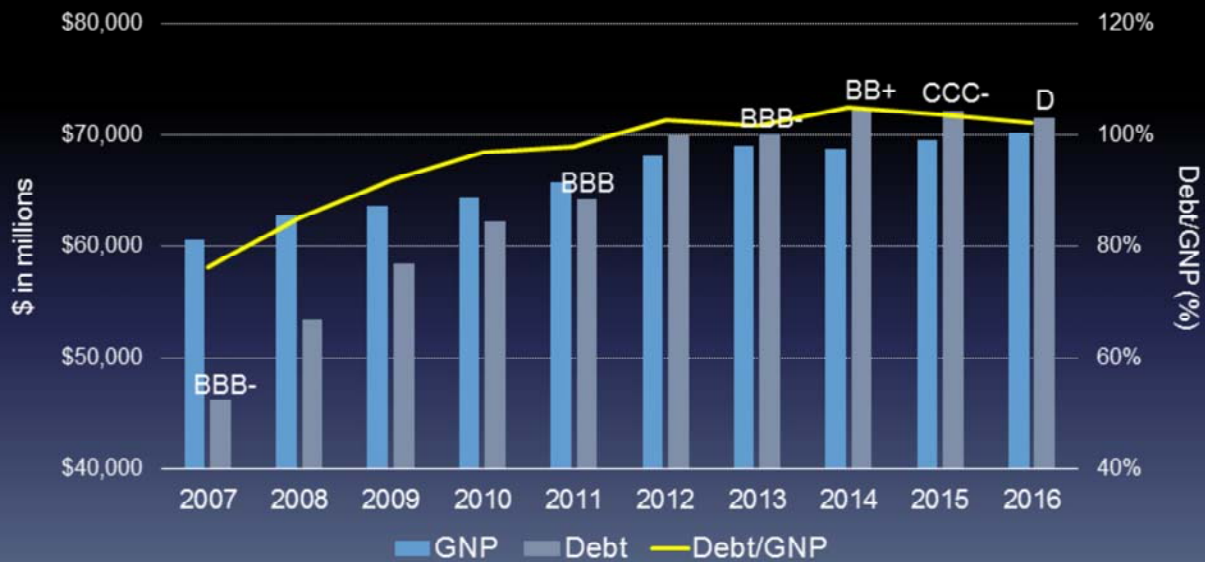
The population is no longer growing. Since its peak in 2005 it has shrunk 11%.

And the government of Puerto Rico estimates that an additional 200,000 residents will leave by the end of 2018.

Source:

- Historical data from Federal Reserve Economic Data, available at <https://fred.stlouisfed.org/series/POPTOTPRA647NWDB>, retrieved April 2018; and
- Estimate of population impact in 2018 from Washington Post, available at www.washingtonpost.com/national/exodus-from-puerto-rico-grows-as-island-struggles-to-rebound-from-hurricanemaria/2018/03/06/b2fcb996-16c3-11e8-92c9-376b4fe57ff7_story.html

And the money owing? Oh yes!



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Because Puerto Rico bonds are triple tax exempt in every State, they have been attractive to investors and allowed the island to continue selling debt beyond its means.

Puerto Rico's current \$74 billion of debt is more than any U.S. state government except California, New York and Massachusetts.

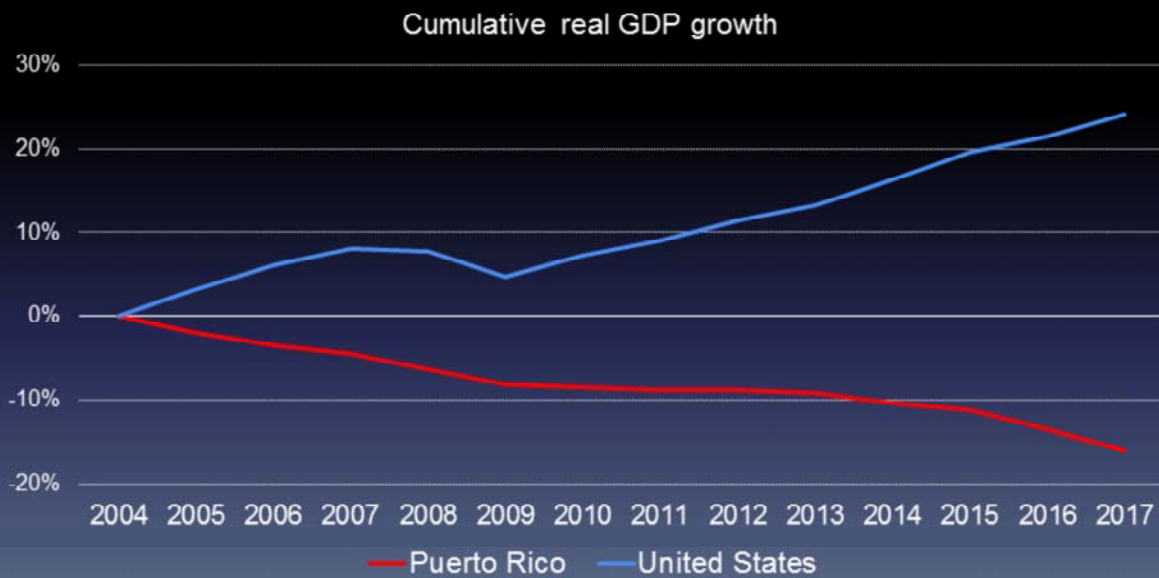
By 2014, Debt to GNP passed 105%.

And this doesn't include another \$52 billion of unfunded pension liability, which puts the total liabilities to GNP ratio at a stunning 180%.

Source:

- Commonwealth 2016 Financial Report;
- Mercatus Center "*Origins of the Puerto Rico Fiscal Crisis*" available at www.mercatus.org/system/files/Joffe-Puerto-Rico-Fiscal-Crisis-v1.pdf;
- GNP data from Puerto Rico Government Development Bank statistical appendix available at www.gdb.pr.gov/economy/statistical-appendix.html;
- Ratings from S&P; and
- 2016 debt balance from Commonwealth of Puerto Rico Financial Information and Operating Data Report available at www.gdb.pr.gov/documents/CommonwealthofPuertoRicoFinancialInfoFY201612-18-16.pdf.

Bankrupt slowly, then all at once



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Between 1996 and 2006 Congress eliminated tax incentives that allowed U.S. businesses to operate in Puerto Rico on a tax-exempt basis.

This contributed to the loss of jobs, causing the population to shrink and the economy to contract 16% over a dozen years.

Source: International Monetary Fund data, retrieved April 2018 available at www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD

Feds step in

- Puerto Rico Oversight, Management and Economic Stability Act (PROMESA)
- Oversight board
- Title III – debt restructure mechanism
- Fiscal plan negotiation

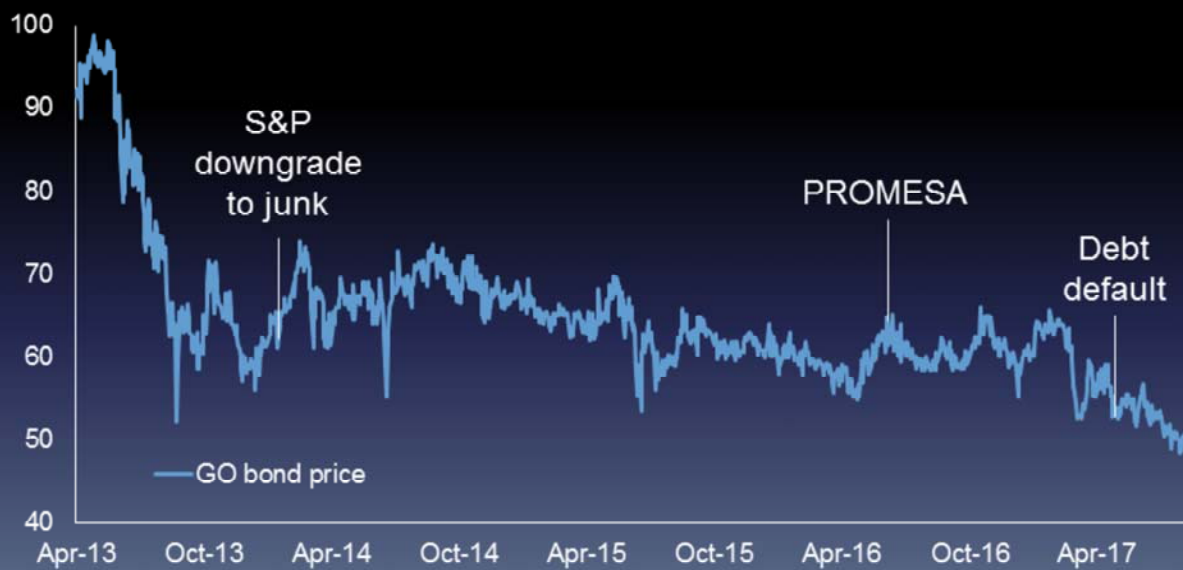
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We have no bankruptcy process for State governments or territories. In 2016 Congress instituted PROMESA, a U.S. federal law to deal with the situation.

It established an unelected oversight board and a process for restructuring debt.

Under PROMESA, Puerto Rico is able to restructure its debt under Title 3, which is similar to a bankruptcy process but outside of bankruptcy court.

Storm before the storms



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After failed negotiations between creditors and the government, Puerto Rico defaulted on its debt in May 2017 and has not paid its bondholders since.

Though looking at the chart, creditors have known for years that Puerto Rico's credit was troubled.

Source: Pricing history from Bloomberg LP, retrieved April 2018, for the Puerto Rico 5% July 2041 general obligation bonds.

Maria

Maria!
I've just met a girl named Maria
And suddenly that name
Will never be the same



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So, Puerto Rico was a financial disaster....before Hurricane Maria. In West Side Story, Tony dies in Maria's arms. Last year, Maria brought devastation that gives new meaning to the word tragedy.

Maria did \$95 billion of damage and accelerated the exodus from the island. Power and water have not been fully restored. There is federal aid to alleviate some of the suffering, but none for bondholders.

Puerto Rico is an outlier

	10 Most Indebted States	Puerto Rico
Debt to Personal Income	6.9%	102.4%
Debt to GDP	6.0%	55.1%
Debt Per Capita	\$3,708	\$16,662
Debt Service to Revenues	8.8%	28.1%


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Puerto Rico's oversight board certified an analysis of Puerto Rico's debt levels in relation to the 10 most indebted U.S. states, across 4 different metrics as calculated by Moody's.

As you can see, Puerto Rico is an outlier.

Source: Puerto Rico figures from April 2018 Control Board fiscal plan and Greenlight calculations.

Puerto Rico can support...less debt

	10 Most Indebted States		Tax-supported Debt in 2018
Debt to Personal Income	6.9%	Apply these metrics to Puerto Rico 	\$3.9B
Debt to GDP	6.0%		\$5.5B
Debt Per Capita	\$3,708		\$11.6B
Debt Service to Revenues	8.8%		\$18.4B

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The oversight board estimated how much tax-supported debt Puerto Rico could bear, if the debt load were set in line with the average of the 10 most indebted states.

Importantly, this analysis assumed that all debt is restructured into 30-year, 5% coupon obligations.

Even so, the supported debt ranges from only \$4 billion to \$18 billion.

This is not a traditional U.S. municipal default where most lenders are made nearly whole eventually.

Source: Puerto Rico figures from April 2018 Control Board fiscal plan and Greenlight calculations.

We, the people of Puerto Rico...

Constitutionally Guaranteed Debt	Net Par (\$M)	Net Debt Service (\$M)
General Obligation bonds	1,419	2,262
Puerto Rico Public Building Authority (PBA)	141	224
Subtotal	\$1,560	\$2,486

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AGO has a lot of exposure to Puerto Rico. It comes in several different flavors.

About 30% is GOs or General Obligation bonds. These are generally believed to be the best positioned of the debt. Under the Puerto Rico Constitution they have priority over other debt.

Source: AGO Q4 2017 financial supplement.

Clawbacks

Other Tax-supported Debt	Net Par (\$M)	Net Debt Service (\$M)
Highways and Transportation Authority (PRHTA)	882	1,537
PRHTA (highway revenues)	495	795
Sales Tax Financing Corporation (COFINA)	272	613
Convention Center District Authority (PRCCDA)	152	264
Infrastructure Financing Authority (PRIFA)	18	35
Subtotal	\$1,819	\$3,244

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When Puerto Rico reached a cap on the amount of GO bonds it could issue under its Constitution, it created public corporations that could issue their own debt, supported by specific revenue streams – for example, highway tolls and sales & use taxes.

All of these bonds are part of the fiscal plan approved by the oversight board. Although these corporations have their own revenue sources, they could be potentially clawed back to pay the GO obligations.

Source: AGO Q4 2017 financial supplement.

Utilities and towns

Other Revenue-supported Debt	Net Par (\$M)	Net Debt Service (\$M)
Electric Power Authority (PREPA)	853	1,199
Aqueduct and Sewer Authority (PRASA)	373	818
Municipal Finance Agency (MFA)	360	447
University of Puerto Rico	1	1
Subtotal	\$1,587	\$2,465

Total Exposure	\$4,966	\$8,195
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The final third of Puerto Rico bonds have also been issued by public corporations and have their own exclusive sources of revenue that Puerto Rico cannot claw back for other purposes.

The PREPA exposure is particularly vulnerable given Maria wiped out the island's electric generation capability.

Altogether, AGO's exposure to Puerto Rico bonds is \$5 billion, and including insured interest payments over \$8 billion, which is more than AGO's entire capital base.

Source: AGO Q4 2017 financial supplement.

Estimated losses

(\$ in millions)	Maximum	Average
Tax-supported debt		
Target tax-supported debt level	\$18,400	\$9,850
Current tax-supported debt	\$46,965	\$46,965
Recovery	39.2%	21.0%
Net par insured on tax supported debt	3,380	3,380
Recovery	<u>39.2%</u>	<u>21.0%</u>
Implied loss	2,056	2,671
Other revenue-supported debt		
Net par insured	1,586	1,586
Implied loss at market values	742	742
Total Loss	\$2,798	\$3,413

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If the maximum tax-supported debt after a restructuring would be at most \$18 billion, it implies losses of over \$2 billion on just the tax supported debt AGO has insured.

This is before you consider losses on its \$1.6 billion exposure to utilities and municipal debt.

Altogether the principal loss approaches \$2.8 billion.

And if we used the average of the four metrics instead, the loss would be \$3.4 billion.

Source: AGO Q4 2017 financial supplement; pricing from Bloomberg LP retrieved April 19, 2018; April 2018 Control Board fiscal plan; and Greenlight calculations.

AGO's current problem

	Net Par (\$M)	Avg. Market Price	Implied Market Value (\$M)	Implied Loss (\$M)
Tax-supported debt	3,380	0.40	1,354	2,026
Other-revenue supported debt	1,586	0.53	844	742
Total	\$4,966	0.44	\$2,198	\$2,768

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Here is a mark to market valuation of AGO's exposure aggregated in two buckets – the first one is included in the fiscal plan, while the second one is everything else. You can see the market **is** pricing in a better recovery than the fiscal plan suggests.

On this basis, the principal loss to AGO appears to be about \$2.8 billion.

AGO is also on the hook for timely interest payments on much of this debt, so its loss would be even higher.

Source: AGO Q4 2017 financial supplement; pricing from Bloomberg LP retrieved April 19, 2018; and Greenlight calculations.

And using Moody's data...

	Debt Service	Implied Loss %		Implied NPV Loss	
		Low	High	Low	High
Tax-supported debt	5,731	49%	81%	1,934	3,216
Other-revenue supported debt	2,464	40%	71%	746	1,299
Total	\$8,195			\$2,680	\$4,515

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We ran a third analysis using Moody's ratings, which encapsulate a range of implied recoveries for each bond issue.

The range of implied recoveries generate a net present value loss between \$2.7 billion to \$4.5 billion, with a midpoint estimate of \$3.6 billion.

All three analyses basically yield similar results.

Source: AGO Q4 2017 financial supplement; Moody's Investor Services; and Greenlight calculations.

Winners and losers

Debt-related lawsuits: Who's suing whom

General Obligation bondholders vs. Cofina bondholders

Debt-related lawsuits: Who's suing whom

Creditors vs. government agencies

Debt-related lawsuits: Who's suing whom

Bond insurers vs. government agencies

Debt-related lawsuits: Who's suing whom

Cofina bondholders vs. their bond trustee

Debt-related lawsuits: Who's suing whom

Pension bondholders vs. Government Employees Retirement System

Bondholders say the commonwealth is wrongly diverting cash away from the retirement system, which they say violates the bond contract.

Key filing:

• Pension bondholders demand for adequate protection payments filed on May 31, 2017 →

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You can't get blood from a stone. Puerto Rico can only support so much debt.

While creditors and government officials and experts and lawyers can spend years arguing whether there is a little more or a little less available, and which creditors get more or less, it's clear that large losses are baked in, and AGOs exposure is diversified across creditor groups.

Source: www.bloomberg.com/graphics/2017-puerto-rico-debt-crisis/

Under-reserved?

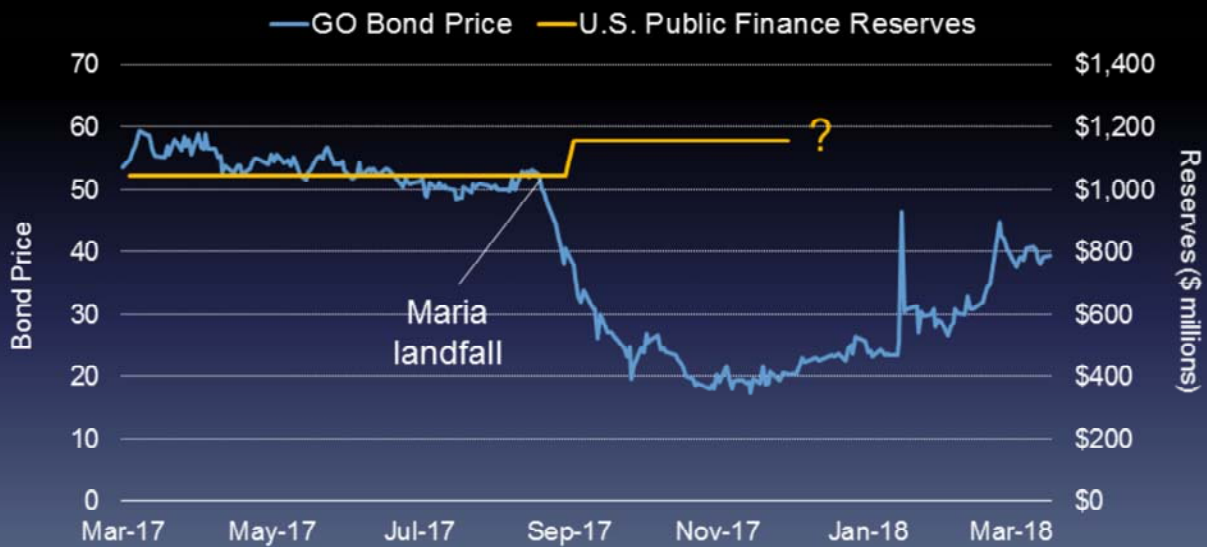


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So, let's come back to AGO's \$1.3 billion of future expected losses. We know that only \$1.1 billion supports the future losses in its entire public finance portfolio. The Puerto Rican losses by themselves seem likely to be 2 to 4 times that.

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Puerto Rico bonds post Maria



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It doesn't appear that AGO has taken the hurricane into account. While the bond market fell about 30 points after the hurricane through year-end, implying about \$1.5 billion in incremental losses, AGO boosted its reserves by a measly \$111 million.

While prices have recovered since, they are still well below where they traded pre-hurricane. We'll see where AGO establishes its reserves for the March quarter shortly.

Source: Pricing from Bloomberg LP retrieved April 19, 2018. Expected loss data, referred to as "reserves", from AGO quarterly and annual reports for time periods presented, available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>.

Management estimates?

(\$ in millions)	
AGO expected loss for Puerto Rico (est.)	\$1,100
NPV of Debt Service assuming a 20% loss	\$1,149
Puerto Rico public debt	\$74,264
Haircut	20%
Implied surviving Puerto Rico debt	\$59,411

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The bulls will correctly say that AGO does not have to mark-to-market its insurance contracts. However, under GAAP accounting, it has to consider a variety of scenarios, assign probabilities to each and then calculate an expected loss. AGO can't simply ignore changing circumstances like the hurricanes.

We believe almost all of AGO's public finance reserves are allocated to Puerto Rico. This implies at most a 20% loss and suggests that Puerto Rico can support almost \$60 billion of debt, which does not seem like a reasonable conclusion from probability weighting multiple scenarios. We think AGO should publicly disclose the calculations so we can better judge whether AGO is using higher internal credit ratings to underestimate losses.

The bulls and AGO will contend that they expect most or all of this money will be recovered. We think this is unlikely. Puerto Rico is not like the structured finance deals where AGO recovered most of its losses by suing the bank sponsors. AGO was not defrauded when it wrote insurance on Puerto Rico. In any case, if you think that Puerto Rico bonds are worth 80 cents, you should buy them and sell AGO stock. That's what we have done as a hedge.

Source: AGO 2017 annual report and AGO 2017 financial supplement, both available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd.>; Greenlight calculations; Puerto Rico public debt total from March 2017 Puerto Rico fiscal plan.

S&P says...

(\$ in millions)

S&P - Puerto Rico Loss Absorption Capacity	\$2,300
Additional earnings for 2017	230
2017 capital return	(563)
Special dividend January 18	(200)
Puerto Rico loss reserve estimate	(1,100)
Total additional Loss Capacity on Puerto Rico	\$667

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If AGO recognized a much bigger loss, its S&P rating would be at risk.

Last year, S&P said AGO could withstand \$2.3 billion of losses. Since then, capital distributions have depleted that to about \$1.8 billion.

Incremental losses could pressure the buyback, and losses along the lines of our calculations would force a choice between a capital raise and surrendering the AA rating the company needs to write new business.

Source: AGO 2017 annual report, AGO 2017 financial supplement, AGO 2017 Q4 earnings call each available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations. S&P loss absorption capacity is from rating analysis dated July 24, 2017.



And Puerto Rico may just be the tip of the iceberg.

Image: www.iStockphoto.com

U.S. BIG exposure ratings

Issuer	Net Par (\$M)	AGO Internal Rating	S&P	Moody's
Oyster Bay, NY	342	BB+	BBB-	Baa3
Hartford, CT	339	B	CCC	Caa3
Virgin Islands Public Finance Authority	169	BB	wd.	Caa3
Stockton Pension Obligation Bonds, CA	113	D		
Penn Hills School District, PA	107	BB	wd.	B3
Butler County General Authority, PA	99	BB		wd.
Detroit-Wayne County Stadium Authority, MI	84	BB+	BBB-	Ba1
Pennsylvania Economic Development Financing Authority (Capitol Region Parking System)	69	BB	BB+	
Atlantic City, New Jersey	61	BB	CCC+	Caa3
Virgin Islands Water and Power Authority	56	BB	CCC+	Caa2

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These are the other “below investment grade” bonds over \$50 million in AGO’s U.S. public finance business.

I don’t have time to go into these issues.

But, notice again that most of the internal ratings are higher than the external credit ratings.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; Greenlight calculations; Moody’s Investors Service; and S&P publications.

Expected loss to be paid

Category	Expected Loss (\$M)	BIG (\$M)	Expected Loss/BIG
Puerto Rico	1,100 e	4,966	22.2%
Other U.S. public finance	57 e	2,174	2.6%
Total	\$1,157	\$7,140	16.2%

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And when we take a look at AGO's estimates of expected losses to be paid, not much has been reserved for the rest of the U.S. public finance portfolio once you back out Puerto Rico.

Source: AGO 2017 annual report and AGO 2017 financial supplement, both available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations.

Non-U.S. BIG exposure ratings

Issuer	Net Par	AGO Internal Rating	S&P	Moody's
Coventry & Rugby Hospital Company	572	BB+	BB+	Ba2
Valencia Fair	337	BB-		Ba2
Road Management Services PLC (A13 Highway)	222	B+		wd.
M6 Duna Autopalya Koncesszios Zartkoruen Mukkodo Reszvenytarsasag	218	BB+		
Autovia de la Mancha, S.A.	121	BB	BB+	Ba3
CountyRoute (A130) plc	91	BB-	B-	
Breeze Finance, S.A.	54	B-	D	Ca
Metropolitano de Porto Lease and Sublease of Railroad Equipment	53	B+		

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Here are the “below investment grade” bonds over \$50 million in AGO’s Non-U.S. public finance business.

Most of it is infrastructure bonds for hospitals, utilities, wind farms and highways, with a different risk profile than municipal bonds.

Source: AGO 2017 financial supplement available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; Greenlight calculations; Moody's Investors Service; and S&P publications.

Expected loss to be paid

Category	Expected Loss (\$M)	BIG (\$M)	Expected Loss/BIG
Non-U.S. public finance	\$46	\$1,731	2.7%

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AGO has just a 2.7% reserve for this book, as well.

Source: AGO 2017 annual report and AGO 2017 financial supplement, both available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations.

Structured finance loss to be paid

Category	Expected Loss (\$M)	BIG (\$M)	Expected Loss/BIG
RMBS	73	2,761	2.6%
Other structured finance	27	606	4.5%
Total	\$100	\$3,367	3.0%

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While structured finance isn't the size it used to be, there is still just a small reserve against a large "below investment grade" exposure.

AGO still has \$12.6 billion of exposure, of which \$3.4 billion is "below investment grade" including significant subprime exposure, but only \$100 million of loss reserves.

Source: AGO 2017 annual report and AGO 2017 financial supplement, both available at <http://assuredguaranty.com/investor-information/by-company/assured-guaranty-ltd>; and Greenlight calculations.

Other lurking problems?



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Beyond the remaining troubled “below investment grade” exposures, AGO has significant exposure to other potentially problematic areas down the line.

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First Dominic to fall



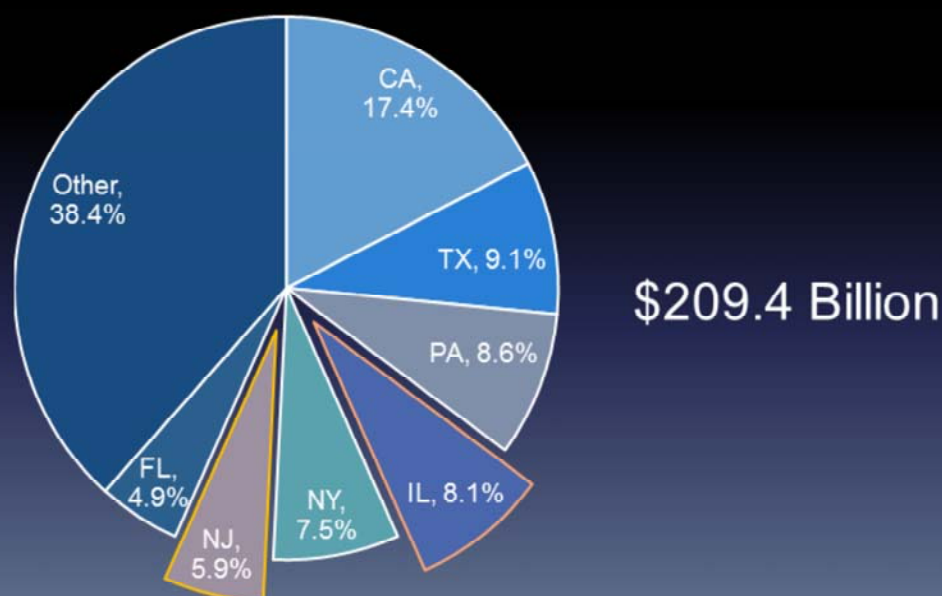
60

In talking about Puerto Rico, AGO's CEO Dominic Frederico has pointed out that if Puerto Rico does not pay its debts, as required by its Constitution, it could have harmful ripple effects on the mainland.

In effect he's threatening that Puerto Rico could become a precedent for the future bankruptcies of insolvent State governments. But he might be right. And that might be very bad for AGO...

Source: AGO March 28, 2018 press release.

U.S. public finance concentration



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AGO has \$17 billion of exposure to Illinois.

And while people are already leaving Illinois, it is not in the worst shape of any U.S. State – it is only #49 according to research from George Mason University. The top honor belongs to New Jersey, where AGO has \$12.4 billion in exposure.

Illinois debt per capita is \$50,400. New Jersey's is \$67,200, and already has one of the highest tax rates. These represent potential significant problems for AGO in the future.

Source: www.mercatus.org/statefiscalrankings. AGO 2017 financial supplement, available at <http://assuredguaranty.com/investor-information/bycompany/> assured-guaranty-ltd; and Greenlight calculations.



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Regulators have to protect policy holders. This company has promised to make good on hundreds of billions of dollars of bonds over a very long period of time. If you own the AGO-insured Illinois 5% GOs of February 2039, you have to be against the buybacks. AGO has obvious needs and limited resources. And a potential ratings cut would curtail new business and put it into run-off.

Having watched the other financial guaranty companies run into trouble over the last decade, regulatory intervention here is plausible. At a minimum, regulators should carefully study whether to approve additional dividends.

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“I work in the insurance industry because, as a balance-sheet guy, there’s a lot of junk you can play with... The fun you can engineer into an insurance company’s balance sheet is a lot more fun than some others.”

Dominic Frederico, 2001
(then Chairman of ACE INA)

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And lest you think AGO’s accounting is likely a place where reasonable people can disagree, I leave you with this quote from AGO’s CEO:

“I work in the insurance industry because, as a balance-sheet guy, there’s a lot of junk you can play with... The fun you can engineer into an insurance company’s balance sheet is a lot more fun than some others.”

I have had fun dis-engineering AGO’s balance sheet with you today. Thank you for having me again.

Source: Philadelphia Inquirer, December 9, 2001, “*The empire builder*” by Joseph N. DiStefano.