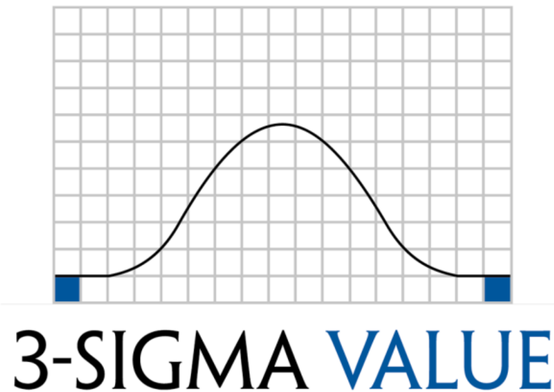

The Subprime Auto Bubble

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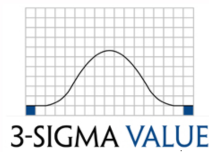

The Subprime Auto Bubble

On December 1, 2015, I awoke to news that November auto sales of 18.1 million SAAR (seasonally adjusted annual rate) was the highest number since the apex of the credit bubble in the summer of 2005[1].

In contrast, on that same December morning when record auto sales were released, The Institute for Supply Management (ISM) reported that its gauge of manufacturing activity fell to 48.6 in November from 50.1 in October, falling into contraction territory for the first time since the end of 2012 and recording the weakest number since the final month of the Great Recession in June 2009 (readings above 50 indicate expansion).

One of the few pillars of recent strength in the U.S. economy has been auto sales with 2015 setting up to be a record year. Most analysts expect 2015 sales to top the record of 17.35 million vehicles in 2000 (according to the U.S. Bureau of Economic Analysis). Unfortunately, much like the debt-fueled growth of the housing bubble, the driver of auto sales is a massive increase in debt, especially subprime debt.

Auto loan debt surpassed $1 trillion in 2015 (dwarfed by the $10 trillion of residential mortgage debt but comparable to the $1.2 billion of student debt and $700 million of credit card debt). A record 86.8% of new vehicles were financed in 3Q 2015 while a record 55.3% of used vehicles were financed (up from 47.0% five years ago). The average amount financed is at record levels as well - $28,936 for new and $18,866 for used. While the total amount of auto debt is small in comparison to the total amount of residential mortgages, the failure of the market will have pernicious effects that rival the failure of the subprime mortgage market, declared contained, in the summer of 2007.

Subprime[2] as a % of total auto loans is the highest it's ever been at 54%/29% of used/new loans (Q3 2015). Driving this growth are a myriad of factors led by zero-bound interest rate policy (ZIRP), aggressive underwriting, and a booming auto ABS market. Beginning with the ABS (asset-backed securities) market, a crop of new auto finance companies have emerged from the

[1] Detroit auto makers artificially boosted sales by offering unprecedented employee discounts during the summer of 2005.

[2] Subprime auto loans are loans to borrowers with a FICO credit score of 660 or lower.

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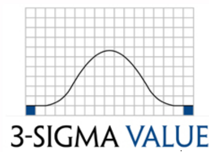

wreckage of the credit bubble packaging subprime auto loans into ABS the way subprime mortgages used to be packaged into MBS (mortgage-backed securities).

GO Financial | Subprime Auto Lenders
https://www.**gofinancial**.com/
Maximize earnings from subprime customers. **GO Financial** is your auto lender that structures financing for customers with unique credit situations.
Dealer Sign In - Contact Us - Customer

I was introduced to Go Financial (subsidiary of DriveTime) by the CFO of America's Car-Mart (CRMT), who lamented the terms being offered by new entrants in the auto loan market. A google search shows the straightforward nature of the pitch – ***maximize earnings from subprime customers***. Go Financial buys subprime loans directly from dealers and has bought nearly $1 billion to date. It then packages the auto loans into ABS. It's most recent offering, the 2015-2 trust, is comprised of auto loans with a weighted-average FICO credit rating of 553, up from 546 in the previous trust, the 2015-1.

Another example is a company called Skopos Financial, which earlier this year sold a $150 million sub-prime ABS in which 20% of the underlying loans were extended to borrowers with a FICO credit rating below 500 – representing the bottom 6% of U.S. borrowers. 14% of the loans were made to borrowers with no score. More recently, Skopos sold $154 million of ABS in which 75% of the loans were made to borrowers with credit scores below 600.

Demand for auto paper is so competitive that underwriting standards are under pressure – which is precisely what led to the credit bubble in the first place – the systematic lowering of credit standards to supply bankers with securities to package and resell. Exactly like mortgage-backed securities sold during the mortgage bubble, these auto-backed securities are packed with loans sure to default at an accelerating rate. Listening to the CFO of America's Car-Mart (CRMT) describe the underwriting terms in today's marketplace, I could hear the fear in his voice. "**Negative equity lending,"** he said, "is destroying the industry."

It begins with a used car financed in excess of its true value (LTV > 1). Affordability (the monthly payment) is maintained because lenders have expanded the duration of loans to record levels – 67/62 months for new/used vehicles, according to Experian. Longer duration means borrowers are paying less per month and have longer to pay. Vehicles are regularly over-valued when traded-in (e.g. underwriter says your car is worth $10,000 even though it's worth $8,000 and only after $500+ of maintenance/repairs). Negative equity grows as it is rolled into a new

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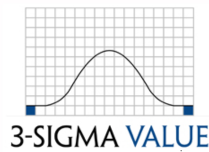

loan upon each trade-in. As borrowers who should never have been given these loans in the first place default at record rates, the Skopos ABS and others of its ilk will lose value. **BUY CDS ON AUTO ABS.**

Zero-bound interest rate policy (ZIRP) enables auto lenders to borrow at 0% and lend to anyone at 15% (average yield on loan receivables). If default rates increase in this environment then lenders should still be able to make money. Except that auto lenders have lowered their underwriting standards so low that it's déjà vu (the housing bubble) all over again. The demand for short-duration asset-backed paper is so frenetic that negative equity lending has become the norm. Auto collateral is largely a mirage. According to America's Car-Mart (CRMT), the average wholesale value of its vehicles is only $2,000. 80% go through the wholesale process while 20% are scrapped.

Some people claim that auto loans are a less risky form of lending because people need their cars to get to work and therefore will pay the car bill before any other. Also, new fleet management technologies have made it easier to track vehicles (with GPS) and lock them upon non-payment. While true, these factors mainly impact the new car market, and not the used car / sub-prime market where cost is prohibitive and defaults are high and rising. Subprime auto lending is almost entirely constrained to the used car market, which is approximately 3x the size of the new car market. Despite rock bottom interest rates and record durations, sub-prime auto borrowers still default at ~30% rate based on *charge-offs, net of collateral recovered* according to data provided by publicly-traded sub-prime auto lenders.

While the marketplace is fragmented with the top 20 auto lenders representing 50% of the retail loan market, most of the top lenders are either large commercial banks or captive lenders inside the major auto manufacturers.

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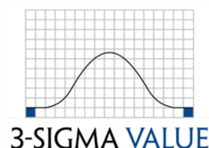

Top 20 Auto Lenders *	
1 Ally Financial (ALLY) f.k.a. GMAC	**6.0%**
2 Wells Fargo (WFC)	5.6%
3 Ford (F)	4.2%
4 Toyota	4.2%
5 JP Morgan Chase (JPM)	4.2%
6 Capital One (COF)	4.1%
7 Nissan Infinity	2.9%
8 Santander Consumer USA Holdings (SC)	**2.5%**
9 Honda	2.4%
10 Chrysler Capital (recently signed 10-yr deal with SC)	1.8%
11 Bank of America (BAC)	1.7%
12 TD Auto Finance (TD)	1.6%
13 CarMax (KMX)	1.2%
14 GM Finance / Americredit (GM)	1.1%
15 US Bank (USB)	1.1%
16 USAA	1.1%
17 Credit Acceptance Corp (CACC)	**1.1%**
18 Huntington National Bank (HBAN)	1.1%
19 Fifth Third Bank (FITB)	0.9%
20 Navy	0.8%
	49.6%
* Source: Experian's State of the Automotive Finance Market Third Quarter 2015.	

The only three lenders on this list that are (1) independent and (2) publicly-traded are **Ally Financial (ALLY)**, **Santander Consumer (SC),** and **Credit Acceptance Corp** (**CACC**)[3]. In addition, we identify three other sub-prime focused auto lenders; they are: **Consumer Portfolio Services (CPSS)**, **Nicholas Financial (NICK), and America's Car-Mart (CRMT)**.

[3] **CarMax (KMX)** is a significant auto lender, however, because its finance operations are captive and represent only a small portion of KMX's total revenue - $367.3 million in FY15 versus $14.3 billion of vehicle sales - we exclude KMX from this analysis as mainly a retailer.

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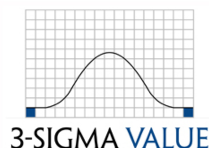

Subprime Auto Lending	ALLY	SC	CACC	CPSS	NICK	CRMT
Price at 12/1/15	20.17	17.79	214.71	4.63	12.62	26.01
FD Shares Outstanding	482	358	21	26	8	9
Market Cap	9,717	6,368	4,423	121	97	232
Plus: Debt	73,276	30,226	1,753	1,976	213	105
Plus: Preferred Stock	813	0	0	0	33	0
Plus: Minority Interest	0	0	0	0	0	0
Less: Cash	5	105	6	21	2	1
Enterprise Value	83,801	36,490	6,169	2,076	342	337
Fiscal Year Ended	12/31/14	12/31/14	12/31/14	12/31/14	3/31/15	4/30/15
Revenue from Sales of Vehicles	0	0	0	0	0	473
COGS	0	0	0	0	0	272
Gross Profit on Sales of Vehicles	0	0	0	0	0	200
Interest & Fee Income on Finance Receivables	8,391	4,640	724	300	87	58
Other Revenue	1,276	1,487	0	0	0	0
Provision for Credit Losses	457	2,617	13	108	20	120
Operating Expenses	2,948	1,777	233	90	34	84
D&A	2,233	825	13	0	0	4
Interest Expense	2,783	523	57	50	6	3
Pre-tax Income	1,246	1,210	421	52	26	51
Gross Margin on Sales	0.0%	0.0%	0.0%	0.0%	0.0%	42.3%
Gross Yield on Receivables	7.8%	17.4%	**26.6%**	15.8%	**27.1%**	14.4%
Other Revenue	1.2%	5.6%	0.0%	0.0%	0.0%	0.0%
Loss Provisions	-0.4%	-9.8%	**-0.5%**	-5.7%	-6.4%	**-29.9%**
Operating Expenses	-2.7%	-6.7%	-8.6%	-4.7%	-10.6%	**-20.9%**
Interest Expense	-2.6%	-2.0%	-2.1%	-2.6%	-1.9%	-0.7%
Pre-tax Yield	3.2%	4.5%	15.5%	2.7%	8.3%	5.2%
Pre-tax ROE	**8.5%**	**28.6%**	**59.9%**	**33.5%**	**27.3%**	**22.1%**
Pro Forma Analysis						
Receivables, gross	107,991	26,719	2,720	1,902	320	402
Allowance for Loan Losses (ALLL)	1,018	3,159	207	79	12	100
Receivables, net of ALLL and Deferred Revenue	106,973	23,014	2,513	1,823	308	301
ALLL as a % of Finance Receivables, gross	1%	12%	**8%**	4%	4%	**25%**
Net Charge-offs (NCOs) as a % of Finance Receivable	0.5%	13%	**0.1%**	6%	7%	**30%**
% Under-reserved	0%	1%	0%	2%	3%	**5%**
$ Under-reserved	0	182	0	41	10	20
2016E EPS - consensus	2.39	2.75	15.82	1.16	1.38	1.90
P/E	8.4x	6.5x	13.6x	4.0x	9.1x	13.7x
Impact of Reserve Adjustment	0.00	-0.51	0.00	**-1.56**	**-1.27**	**-2.27**
2016E EPS - pro forma	**2.39**	**3.26**	**15.82**	**-0.40**	**0.11**	**-0.37**
P/E - pro forma	8.4x	5.5x	13.6x	NM	NM	NM
% Change in EPS	0%	-18%	0%	**-134%**	**-92%**	**-120%**
Tangible Book Value (TBV)	14,599	4,233	702	155	97	230
per share	30.30	11.83	34.09	5.96	12.58	25.85
P/TBV	0.7x	1.5x	**6.3x**	0.8x	1.0x	1.0x
Impact of Reserve Adjustment	0	182	0	41	10	20
Tangible Book Value (TBV) - pro forma	14,599	4,051	702	115	87	210
per share	30	11	34	4	11	24
P/TBV - pro forma	0.7x	1.6x	6.3x	1.1x	1.1x	1.1x
% Change in TBV	0%	-4%	0%	**-26%**	**-10%**	**-9%**

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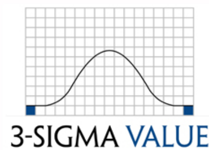

Ally Financial (ALLY) f.k.a. GMAC is the only one of the auto lenders on this list that focuses on prime rather than sub-prime borrowers. Net Charge-offs (NCOs) as a % of finance receivable barely register at 0.5%. Less risk translates to less return in the form of 8.5% pre-tax ROE. Trading at 0.7x TBV (and 8.4x P/E), it could be argued that ALLY is worth 1x TBV = $30.30 (50% upside), however, given that it recently lost its 100-yr relationship with GM (who chose to bring financing in-house) a discount to tangible book value is warranted.

Santander Consumer USA Holdings (SC) in 2013 signed a 10-yr agreement with Chrysler to originate private-label loans and leases under the Chrysler Capital brand. In the third quarter of 2015, Chrysler loans represented $4.7 billion of $7.6 billion (62%) in total originations, a drastic shift from before 2013 when SC focused primarily on used car financing with over 80% of loans sub-prime. While SC sells the prime loans it originates into the ABS market, it holds sub-prime loans – reflected in SC's gross yield of 17.4%, which is nearly 10% higher than the 7.8% yield earned by ALLY. With credit losses accelerating, SC is at risk of having to increase its reserves and lower its return expectations; however, as long as Banco Santander owns 61% and remains a key partner there is less risk of a liquidity crisis. 6.5x P/E is a fair price, not a cheap one.

Credit Acceptance Corp (CACC) extends credit to 8,061[4] independent dealerships in the US (out of 55,000 total). CACC is peerless in that it trades at **a sky-high 6.3x TBV**, compared to its so-called peers around 1x. This massive valuation premium is directly tied to its unique lending model that yields astronomical returns – 26.6% gross yield on receivables, 15.5% pre-tax yield, and **59.9% pre-tax ROE** – yields that are ultimately unsustainable.

Unlike most independent auto lenders who buy loans directly from dealerships, CACC strikes a partnership with its dealers to share the risk. At the time of sale, the dealer receives an advance from CACC equal to roughly 2/3 of its 80% share, adjusted for credit risk (the more the risk, the less the advance). The amount of the advance is booked as a gross receivable. CACC then receives 100% of collections (CACC services the loans) until the advance has been paid back. Afterward, CACC receives 20% of collections while the dealers get 80%. Because CACC is ultimately responsible for 20% of the collection, its allowance for loans losses (ALLL) is 20% of the expected net charge-off (NCO). As of 9/30/15, ALLL of $230 million equaled 7.2% of $3.2 billion of gross receivables. That 7.2% represents 36.1% in NCOs – an amount of protection that is consistent with performance.

[4] As of 9/30/15.

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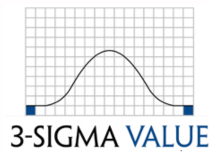

As credit quality continues to deteriorate and NCOs inch up to 40+%, ROE will compress from 50% as of 9/30/15 to ~30% by the end of 2017 (Base Case Operating Scenario 1), and valuation will adjust accordingly – from 5x TBV to ~3x TBV.

CACC appears broadly capitalized with a $310 million revolving credit facility[5], two issues of senior notes totaling $550 million, four warehouse facilities[6] with $650 million of borrowing capacity, and access to the ABS market where CACC has completed six Term ABS financings totaling $2 billion; however, much of this capital is fleeting in a crisis. There will be a tipping point when warehouse credit lines are pulled, the ABS market freezes, and standards are reconsidered. Negative equity auto loans will be eliminated. Durations will mean revert. Credit scoring will be required. In this Downside Case Operating Scenario, CACC will face a liquidity crisis. CACC probability-weighted target price = $117.56 per share (down 45%).

Consumer Portfolio Services (CPSS) purchases and services loans primarily from franchised automobile dealerships secured by late model used vehicles (subprime) and, to a lesser extent, new vehicles (prime). CPSS is entirely dependent on a vulnerable ABS market, and at 4.0x 2016E consensus EPS and 0.8x TBV, the market reflects the unsustainability of this business model. CPSS is a zero when the subprime ABS market freezes.

Nicholas Financial (NICK) purchases and services auto loans made by franchised and independent auto dealers, via a network of 67 company-owned and operated branch offices, headquartered in Florida. NICK secured a $225 million credit line earlier this year that funds more than two-thirds of its $308 million of outstanding receivables, net of ALLL, rendering this lender mostly inoculated from the inevitable collapse in the subprime ABS and warehouse markets. EPS will get crushed when NICK has to increase reserves like everyone else, however it should not be fatal given a more stable capital structure.

America's Car-Mart (CRMT), headquartered in Bentonville Arkansas, was founded in 1981 and operates 146 automotive dealerships in the South-Central United States. CRMT is a fully-integrated operation, from sales through finance. CRMT mainly sells older model used vehicles with an average retail sale price of ~$10,000 versus an average salvage value of ~$2,000. CRMT lends up to 100% of the value of the vehicle and charges an average of 15% per year.

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[5] Wells Fargo (WFC).

[6] Wells Fargo (WFC), Bank of Montreal (BMO), Fifth-Third Bank (FITB), and Flagstar Bank (FBC).

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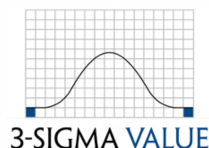

CRMT Capitalization as of 7/31/15	
Price as of December 1, 2015	**$26.01**
FD Shares Outstanding	8,910
Market Capitalization	**231,739**
Cash & Equivalents	735
Revolving Credit Facilities ($145M @ LIBOR+2.375% ~ 3%)	105,410
Preferred Stock	400
Non-Controlling Interest	100
Enterprise Value (EV)	**336,914**
Base Case Operating Scenario 1	
EV / EBITDA - FYE 2014	**8.4x**
EV / EBITDA - FYE 2015	**6.3x**
EV / EBITDA - FYE 2016	**23.5x**
EV / EBITDA - FYE 2016	**NM**
P/E - FYE 2014	**11.6x**
P/E - FYE 2015	**8.0x**
P/E - FYE 2016	**52.6x**
P/E - FYE 2017	**NM**

Generally, CRMT sells vehicles between six and twelve years of age with 90,000 to 140,000 miles, and pays between $3,000 and $7,000 per vehicle. CRMT's installment sales contracts typically include down payments ranging from 0% to 17% (average of 7%), terms ranging from 18 months to 42 months (average of 30.2 months), and annual interest charges ranging from 14% to 15% (weighted average of 14.9%). CRMT requires that payments be made on a weekly, bi-weekly, semi-monthly or monthly basis to coincide with the day the customer is paid by his or her employer.

Short Thesis

1. CRMT is significantly under-reserved.

Sooner or later, CRMT will be forced to increase its allowance for loan losses (ALLL) to offset a higher level of net charge-offs (NCOs). As NCOs rise from 27% in 2015 to closer to 32% in 2016, ALLL must rise from a lower level at 25%. The 7% increase in provisioning is equal to

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$20 million ($2.27 per share). Quarterly EPS peaked at $0.83 in the first quarter of 2015 before plummeting to $0.52 in the second quarter and turning negative (-$0.05) in the third. With a massive injection into ALL still ahead, earnings will be wiped out for the next two years. The combination of a higher level of reserves to cover a higher level of charge-offs destroys this business model. CRMT only makes money by under-reserving for losses and then raising capital by diluting shareholders or borrowing more.

2. At a level of credit provisioning commensurate with net charge-offs, CRMT loses money on every vehicle sold.

America's Car-Mart (CRMT) Per Unit Data					
FYE 4/30	2013	2014	2015	2016	2017
Average Retail Sale Price	9,721	9,768	9,680	10,170	10,247
COGS, ex. D&A	-5,867	-5,906	-5,826	-6,545	-6,521
Gross Profit	3,854	3,862	3,854	3,625	3,726
% GM	39.7%	39.5%	39.8%	35.6%	36.4%
Operating Expenses	-1,798	-1,849	-1,793	-2,000	-2,033
% of Sale	18.5%	18.9%	18.5%	19.7%	19.8%
Provision for Credit Loss	-2,357	-2,802	-2,572	-3,269	-4,233
% of Sale	24.3%	28.7%	26.6%	32.1%	41.3%
D&A	69	77	82	93	102
Interest Expense	-72	-70	-62	-70	-72
Interest Income	1,201	1,285	1,235	1,322	1,320
Pre-tax Profit per Car	898	502	743	-299	-1,191

Between 2013 and 2015, pre-tax profit per car ranged between $502 and $898. If CRMT were to provision for losses in line with its actual credit losses than the Company would lose money on every car sold. 3-Sigma Value's Base Case Scenario 1 assumes ALLL = LTM NCOs (allowance for loan losses equals latest twelve months net charge-offs).

3. CRMT burns cash despite reporting positive EPS.

A bright red flag is flown when EPS is materially in excess of free cash flow (FCF), or even worse when EPS is positive but FCF is negative. During the three years ended 4/30/15, CRMT reported cumulative net income of $82.8 million while generating negative FCF every year for a cumulative total of **negative** $69.4 million.

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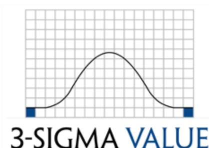

Net Income vs. Free Cash Flow - Base Case Operating Scenario 1					
FYE 4/30	2013	2014	2015	2016	2017
Revenue	464,676	489,187	530,321	545,379	530,620
Cost of Sales, excl. D&A	238,984	251,319	272,446	294,193	285,633
Gross Profit	225,692	237,868	257,875	251,187	244,988
% Margin	*48.6%*	*48.6%*	*48.6%*	*46.1%*	*46.2%*
Operating Expenses	73,238	78,667	83,819	89,899	89,032
Provision for Credit Losses	96,035	119,247	120,289	146,945	185,423
Pre-tax Income	50,656	33,672	47,034	7,028	-37,116
Taxes	18,491	12,543	17,544	2,622	-13,859
% Rate	*36.5%*	*37.3%*	*37.3%*	*37.3%*	*37.3%*
Net Income	**32,165**	**21,129**	**29,490**	**4,406**	**-23,258**
FD Shares Outstanding	9,570	9,392	9,049	8,910	8,910
EPS	**3.36**	**2.25**	**3.26**	**0.49**	**-2.61**
EBITDA	56,419	39,954	53,767	14,342	-29,468
Unlevered Free Cash Flow	-13,698	6,400	-4,729	-1,998	-12,875
Cash Interest	2,937	2,997	2,903	3,133	3,162
Cash Taxes	18,491	12,543	17,544	2,622	0
Free Cash Flow Available to Pay Debt	**-35,126**	**-9,140**	**-25,176**	**-7,753**	**-16,038**

4. CRMT will experience a liquidity crisis.

CRMT has $735k cash and only $38 million available under its $145 million revolving credit facility. Unlike most other subprime auto finance companies, CRMT does not sell the loans that it originates into the ABS market; therefore, it doesn't need a failure of the subprime ABS market in order to face a liquidity crisis – it will run out of cash either way. Restructuring is inevitable.

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