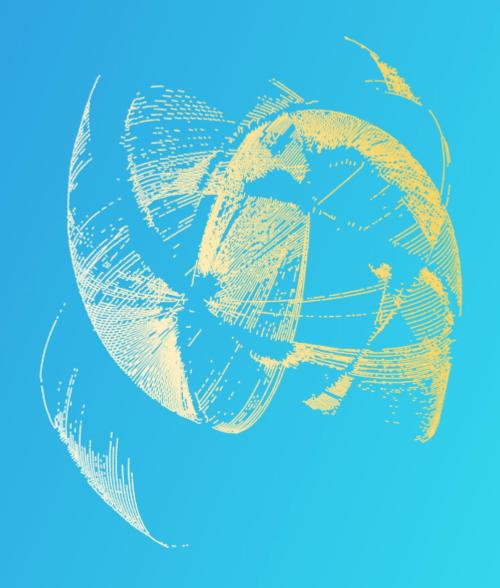
Asset Backed Securities Часть 1. Принципы



This event is not associated in any form with Goldman Sachs or any of its subsidiaries.

All of the views expressed are based on the personal experiences only.

None of the private, internal or any other associated documents of Goldman

Sachs have been used in preparation of this event. All of the opinions expressed

in this event are private of the presenter and are not related to Goldman Sachs or any of its subsidiaries.

Часть первая

- 1. История и настоящие тренды
- 2. Принципы ABS
- 3. Простейшие структурированные продукты
- 4. Принципы МВЅ
- 5. Примеры CDS



История и настоящие тренды

Salomon Brothers – Lewis Ranieri

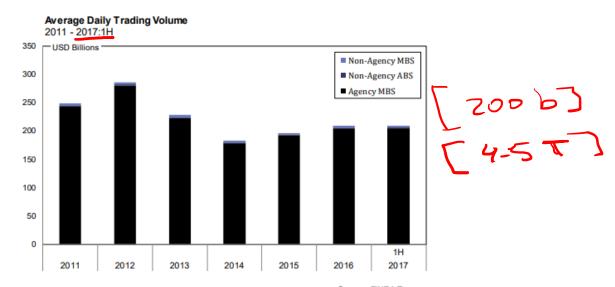


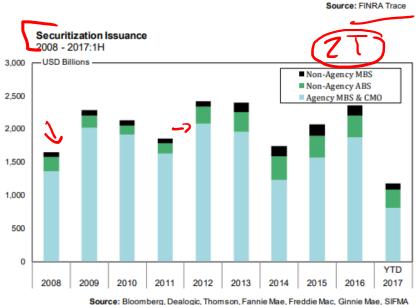


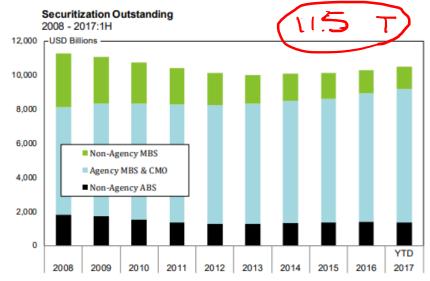




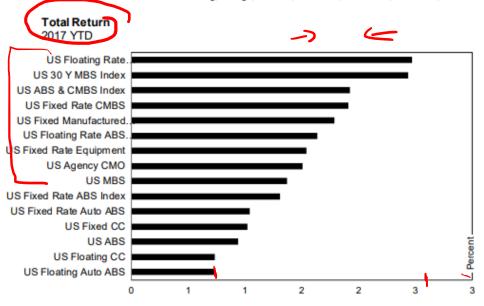




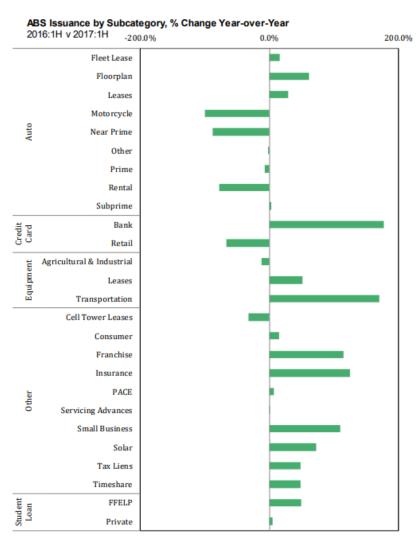












Sources: Thomson Reuters, Bloomberg, prospectus filings

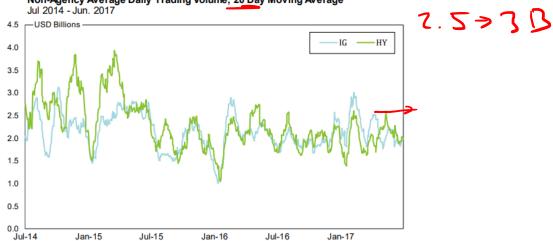


Mortgase



Source: FINRA Trace

Non-Agency Average Daily Trading Volume, 20 Day Moving Average



Source: FINRA Trace

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Asset Backed Securities, Issuance						
•	2013	2014	2015	2016	2017 YTD	
Auto	88.1	99.5	98.4	92.0	52.5	
Fleet Lease	3.1	3.9	2.9	5.2	4.2	
Floorplan	8.3	10.2	9.2	7.7	6.0	
Leases	13.3	17.1	18.0	13.9	10.5	
Near Prime	4.3	3.6	6.8	3.5	0.2	
Prime	36.0	42.3	34.7	36.4	18.0	
Subprime	19.5	19.9	22.3	22.3	13.0	
CDO	95.0	127.5	112.3	116.5	144.5	
Refi	0.0	0.0	0.4	38.8	96.3	
Credit Cards	36.9	51.4	25.0	27.2	26.8	
Equipment	19.4	20.3	17.7	14.9	11.3	
Floorplan	0.9	1.4	0.8	1.2		
Leases	5.2	5.0	5.1	5.0	4.7	
Transportation	7.7	7.3	5.9	4.0	4.5	
Other	42.0	41.5	61.4	55.1	37.1	
Consumer	3.6	6.0	7.9	10.3	5.4	
Franchise	1.2	1.6	7.2	2.8	5.9	
PACE			0.2	1.6	0.5	
Servicing Advances	5.3	2.5	5.5	3.5	0.8	
Solar	0.1	0.5	0.6	0.3	0.5	
Structured Settlement	0.6	0.7	0.8	0.1	0.4	
Timeshare	2.4	2.8	2.4	2.6	1.4	
Student Loans	22.7	15.7	14.2	16.4	7.3	
FFELP	19.0	12.9	7.2	8.3	4.3	
Private	3.0	2.8	6.6	7.9	3.0	

Mortgage Backed Securities, Issuance							
	2013	2014	2015	2016	2017 YTD		
CMBS	79.2	83.4	96.4	73.2	36.0		
Conduit/Fusion	48.4	43.1	57.3	43.8	20.0		
Large Loan	1.5	6.6	10.3	1.8			
Single Asset/Single Borrower	24.7	23.3	24.1	21.2	12.9		
Resecuritization	2.2	2.0	0.9	2.1			
RMBS	48.0	77.6	94.5	85.7	53.5		
Jumbo Prime	12.9	8.8	12.7	10.4	5.4		
Scratch & Dent	9.5	30.1	39.5	28.5	20.5		
Seasoned	5.0	4.2	3.2	11.5	7.0		
Single Family Rental	0.5	6.5	6.6	4.8	1.4		
Subprime/Nonprime		0.1	0.4	1.2	2.6		
Resecuritization	15.4	16.2	17.0	9.7	6.6		
Agency (ex. CMO)	1,642.7	1,000.7	1,360.7	1,607.2	668.3		
FNMA	764.5	407.7	516.4	637.8	279.4		
FHLMC	460.8	279.5	390.0	443.2	159.7		
GNMA	417.4	313.5	454.3	526.2	229.1		

Asset Backed Securities, Issuance by Rating (2017 YTD)							
		4		BBB/Baa			
	AAA/Aaa	AA/Aa		and Below	NA/NR	Total	
Auto	38.6	2.9	2.6	2.4	6.0	52.5	
Fleet Lease	3.4	0.0	0.0	0.0	0.7	4.2	
Floorplan	5.8	0.1	0.1	0.0		6.0	
Leases	9.1	0.2	0.1		1.0	10.5	
Near Prime					0.2	0.2	
Prime	14.7	0.3	0.3	0.1	2.6	18.0	
Subprime	5.1	2.2	2.1	2.2	1.5	13.0	
CDO	93.0	16.9	9.3	8.3	17.0	144.5	
Refi	68.9	12.9	7.1	4.5	2.9	96.3	
Credit Cards	26.5	0.1	0.1		0.1	26.8	
Equipment	3.5	0.1	4.1	0.6	3.0	11.3	
Floorplan						0.0	
Leases	2.9	0.1	0.6	0.1	1.0	4.7	
Transportation			3.2	0.5	0.8	4.5	
Other	3.4	1.9	2.1	5.8	24.0	37.1	
Consumer		1.4	0.4	0.4	3.6	5.8	
Franchise				4.3	1.7	5.9	
PACE					0.5	0.5	
Servicing Advances	0.3	0.0	0.0	0.1		0.4	
Solar					0.5	0.5	
Structured Settlement	0.1			0.0	0.2	0.4	
Timeshare		0.3	0.6	0.2	0.2	1.4	
Student Loans	3.9	2.6	0.3	0.1	0.5	7.3	
FFELP	1.5	2.4		0.0	0.4	4.3	
Private	2.4	0.2	0.3	0.1	0.1	3.0	

	BBB/Baa						
	AAA/Aaa	AA/Aa	A/A	and Below	NA/NR	Total	
CMBS	21.9	3.8	2.3	4.0	4.0	36.0	
Conduit/Fusion	14.8	2.1	1.0	0.6	1.4	20.0	
Large Loan						0.0	
Single Asset/Single Borrower	6.1	1.7	1.1	3.3	0.7	12.9	
Resecuritization						0.0	
RMBS	9.6	0.9	1.7	7.8	33.5	53.5	
Jumbo Prime	3.4	0.3	0.1	0.1	1.5	5.4	
Scratch & Dent	2.6	0.2	0.3	0.5	16.8	20.5	
Seasoned	2.2	0.2	0.1	0.3	4.2	7.0	
Single Family Rental	0.2	0.0	0.0	0.0	1.2	1.4	
Subprime/Nonprime	0.7	0.1	0.2	0.1	1.5	2.6	
Resecuritization			1.0	0.3	5.2	6.6	
Agency (ex. CMO)	N/A	N/A	N/A	N/A	N/A	N/A	
FNMA	N/A	N/A	N/A	N/A	N/A	N/A	
FHLMC	N/A	N/A	N/A	N/A	N/A	N/A	
GNMA	N/A	N/A	N/A	N/A	N/A	N/A	

7



Банк



Соединять людей с деньгами с теми, кому эти деньги нужны

Банк



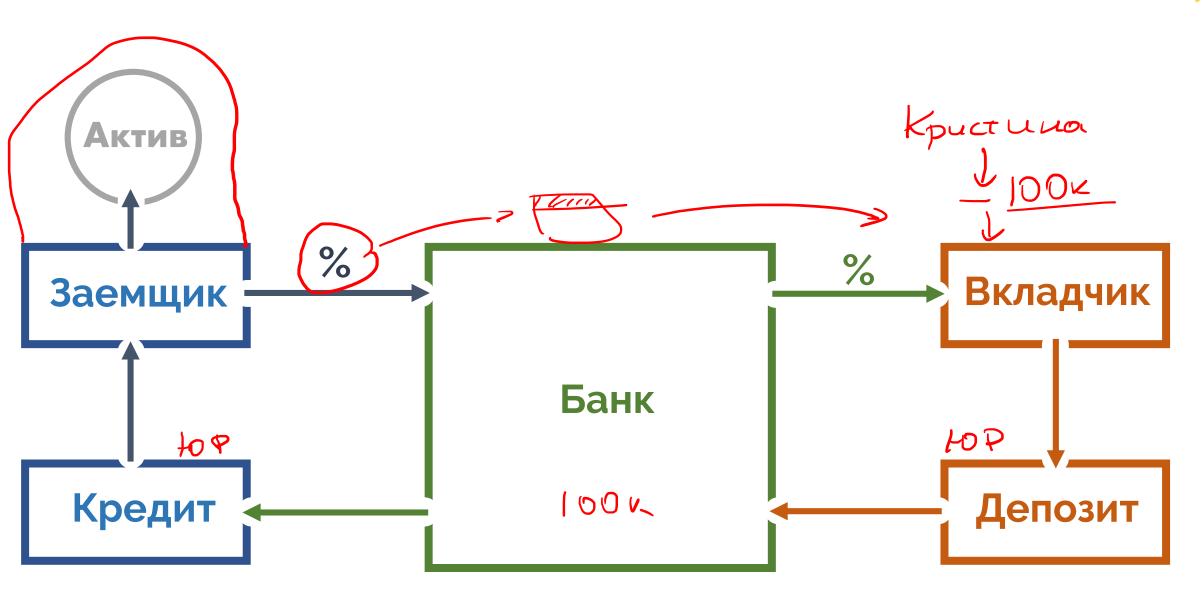


Заемщик

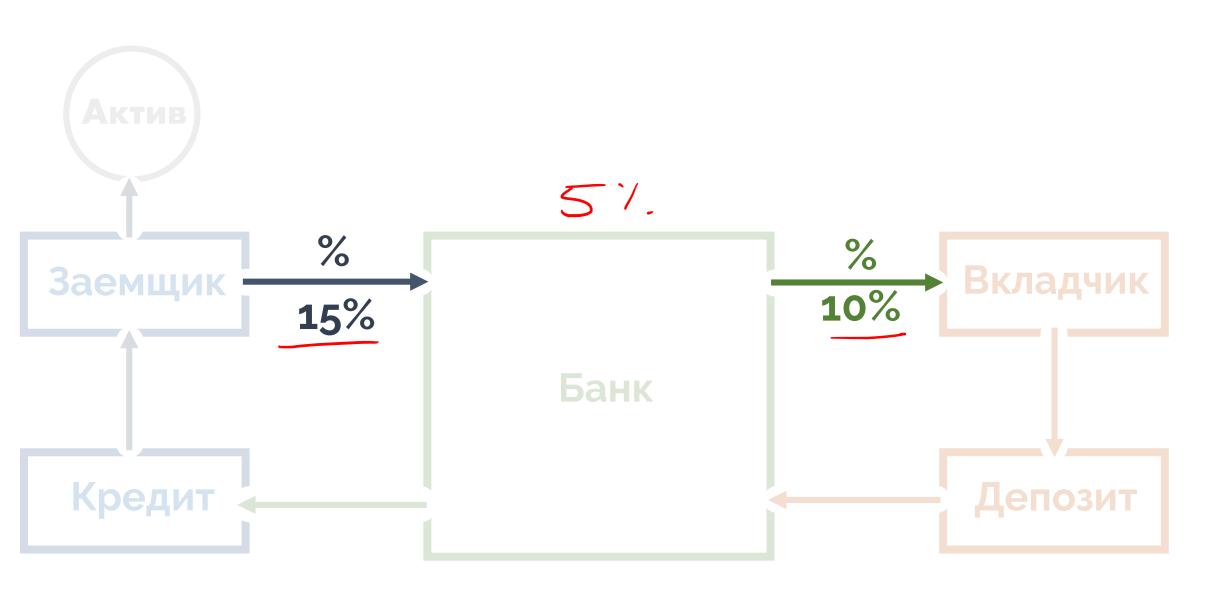
Банк

Вкладчик

















Заемщик



Вкладчик





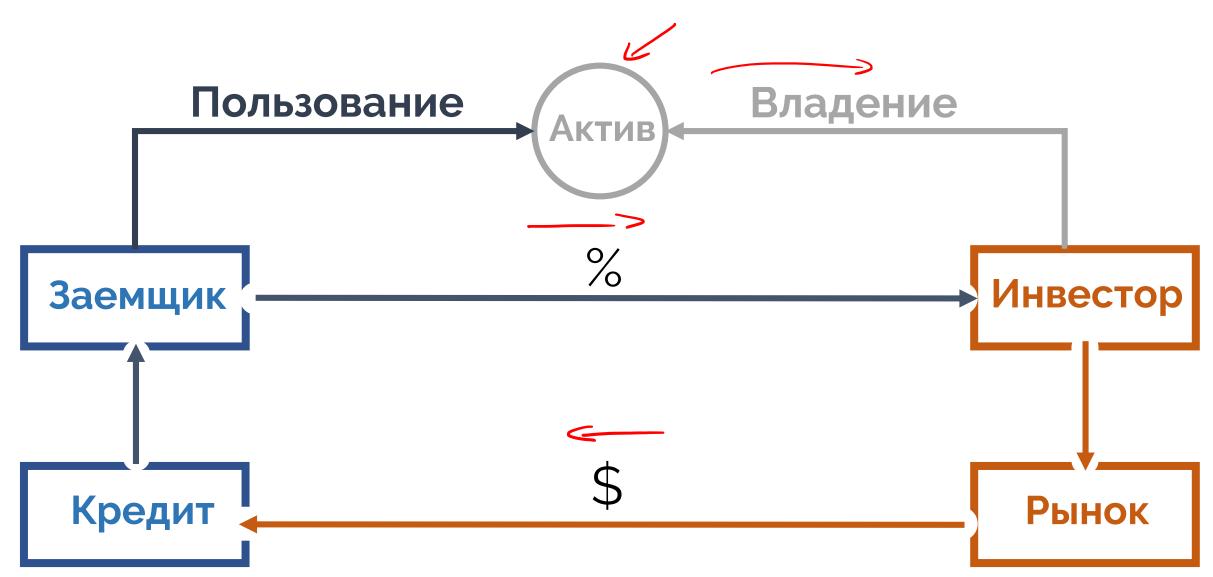
Заемщик

Инвестиционный Банк Вкладчик

Asset - Back Security



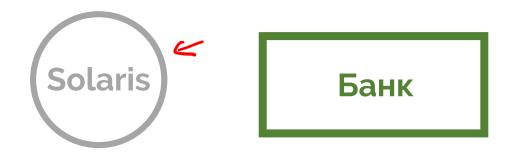




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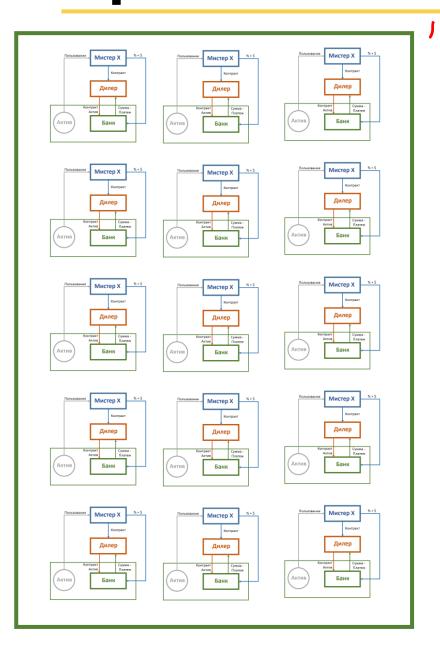






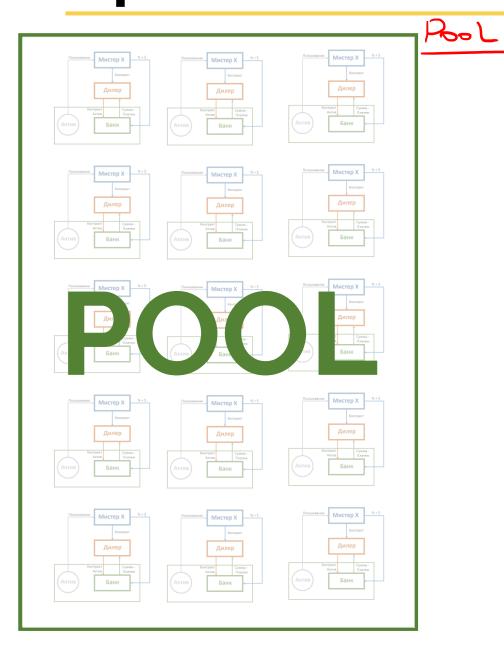






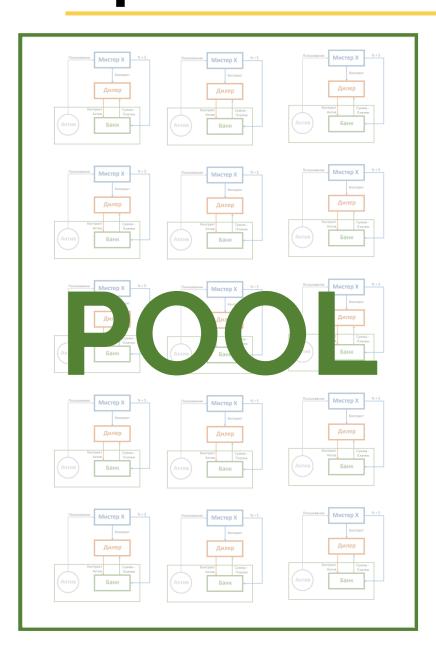












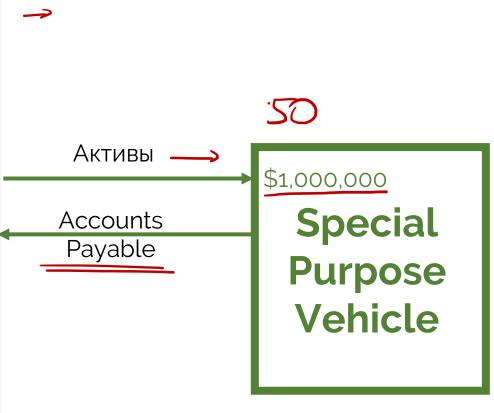




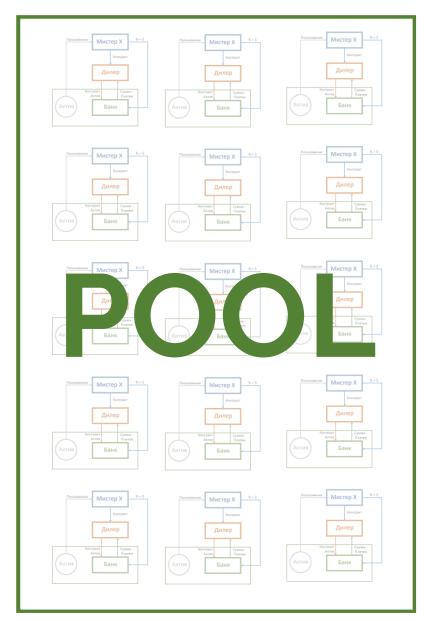


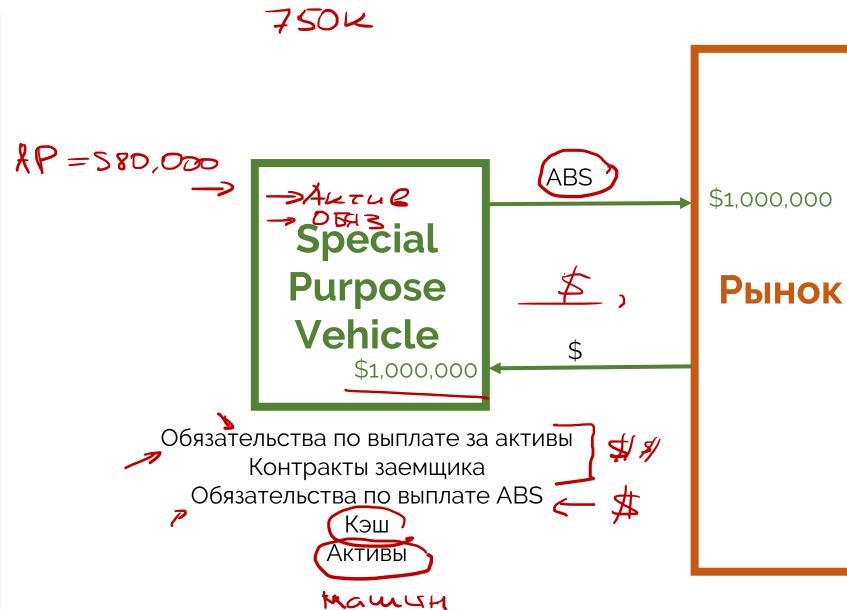




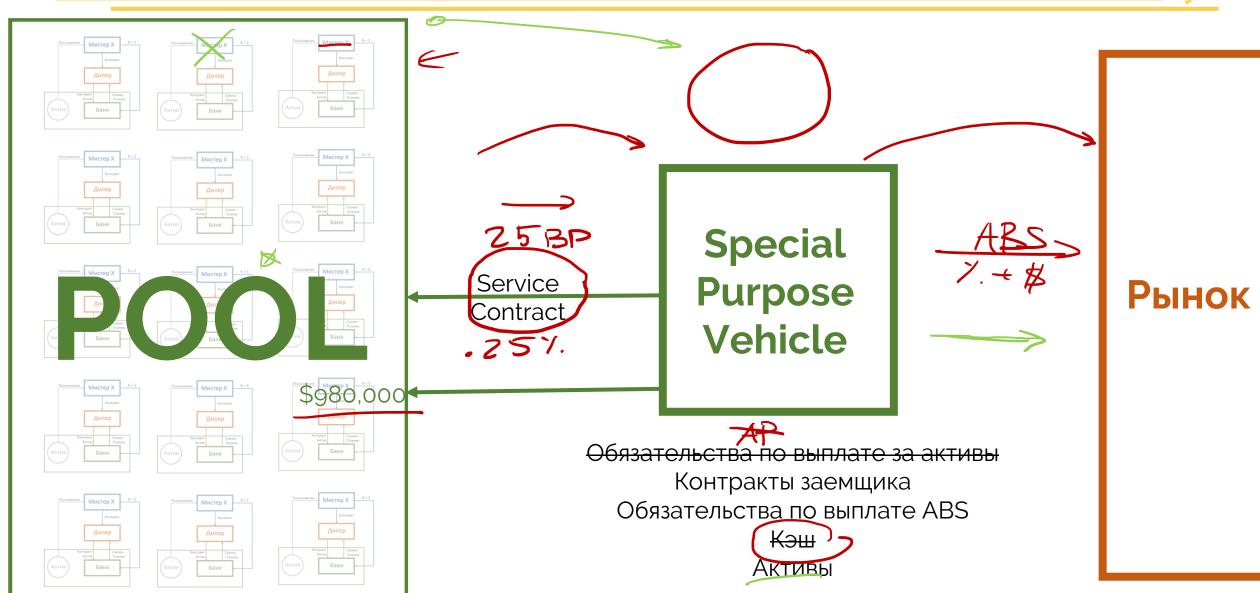












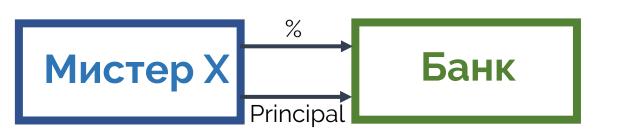




Банк

Special Purpose Vehicle

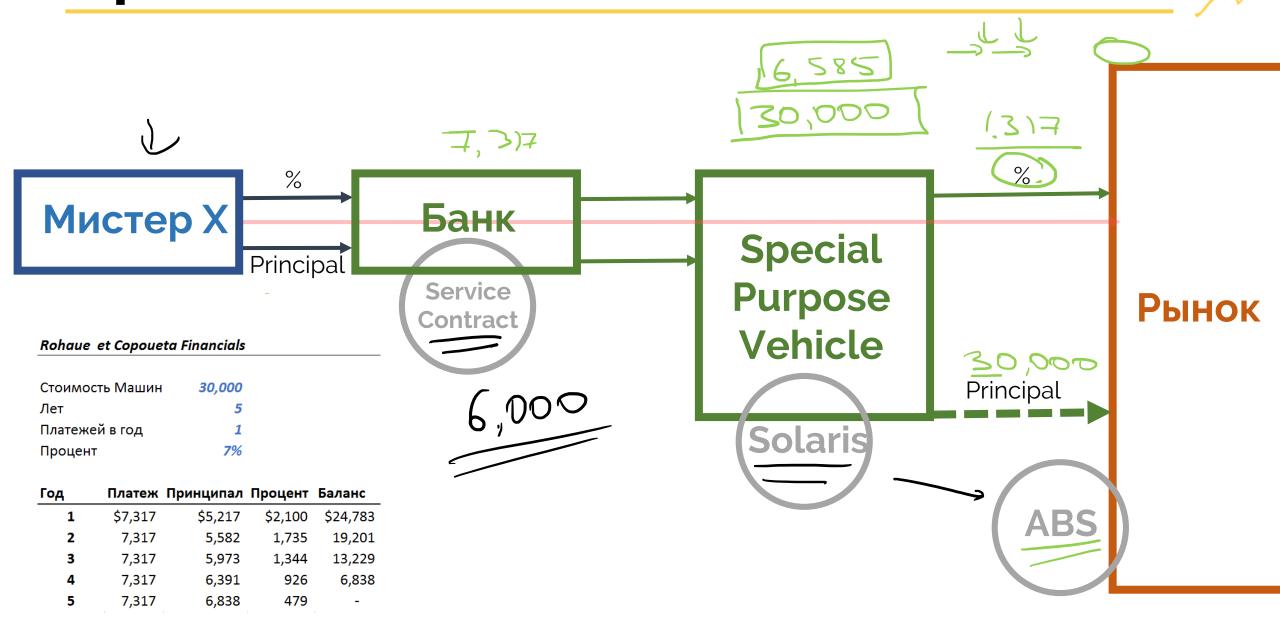




Rohaue et Copoueta Financials

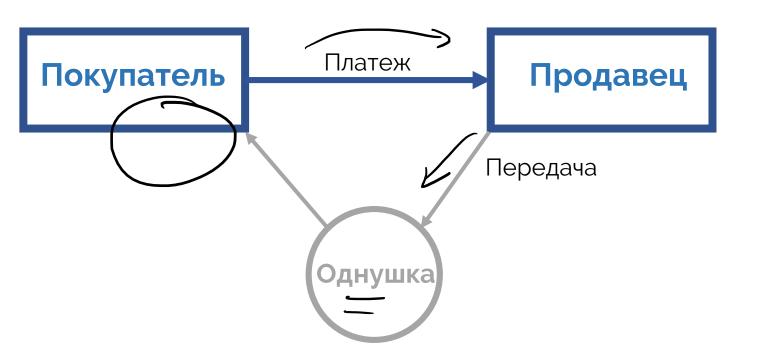
Стоимость Машин	30,000
Лет	5
Платежей в год	121
Процент	7%

Год	Платеж	Принципал	Процент	Баланс
1	\$7,317	\$5,217	\$2,100	\$24,783
2	7,317	5,582	1,735	19,201
3	7,317	5,973	1,344	13,229
4	7,317	_ 6,391	926	6,838
5	7,317	6,838	479	-

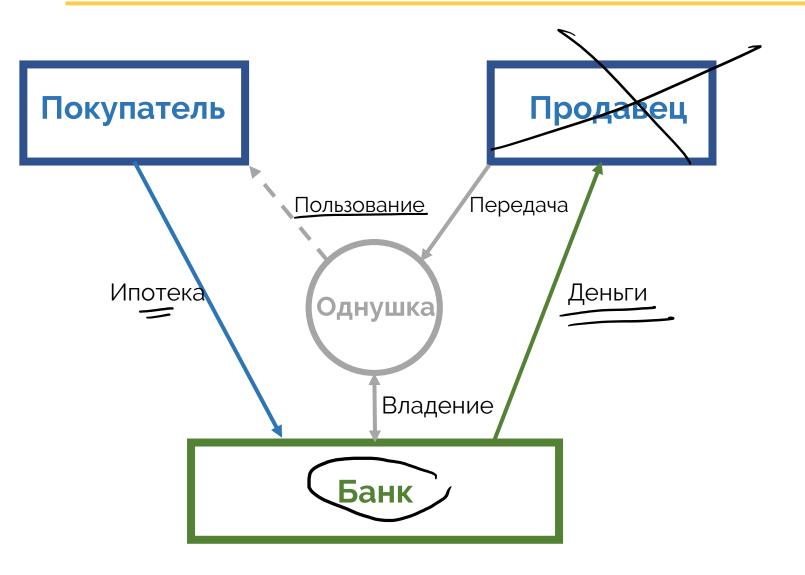


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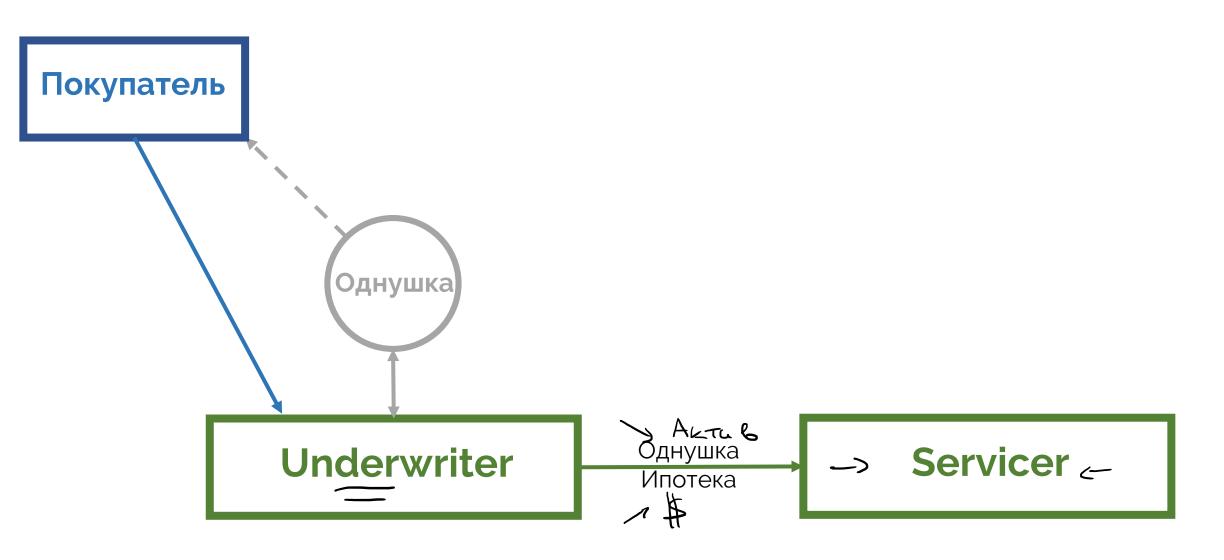




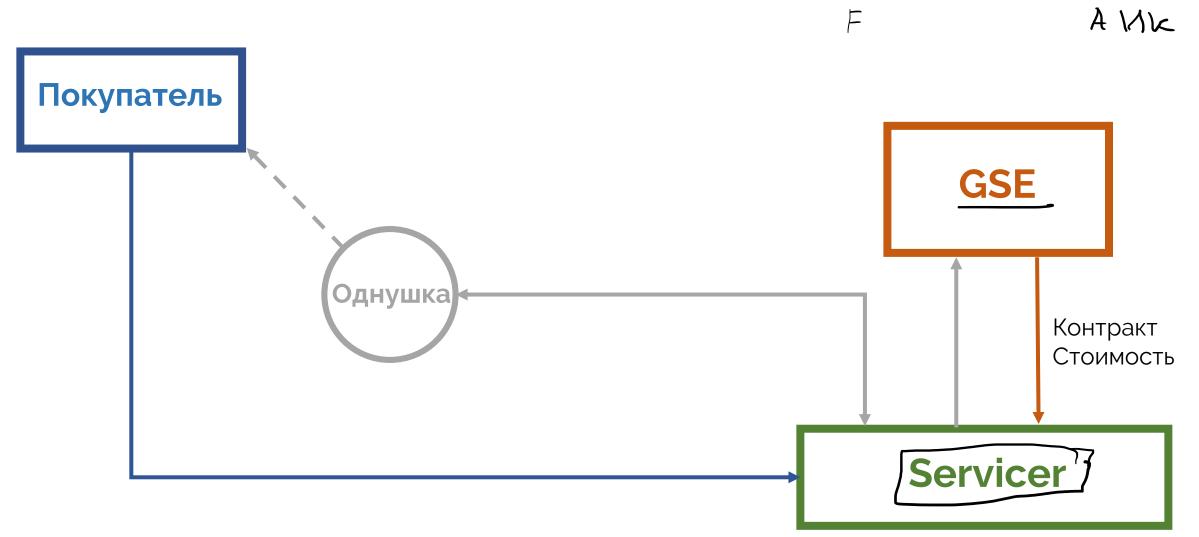




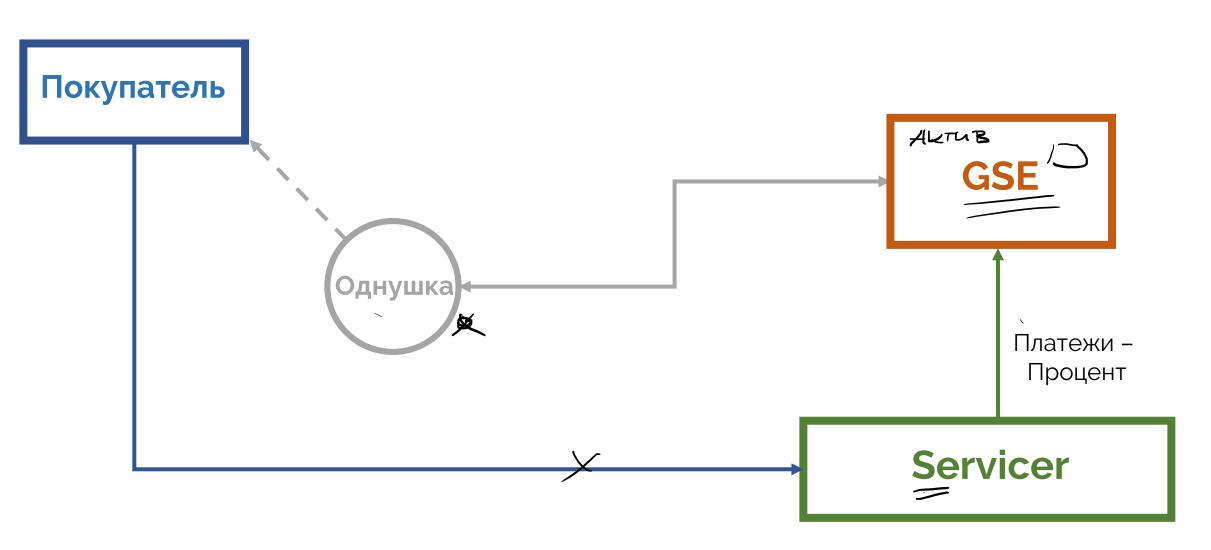


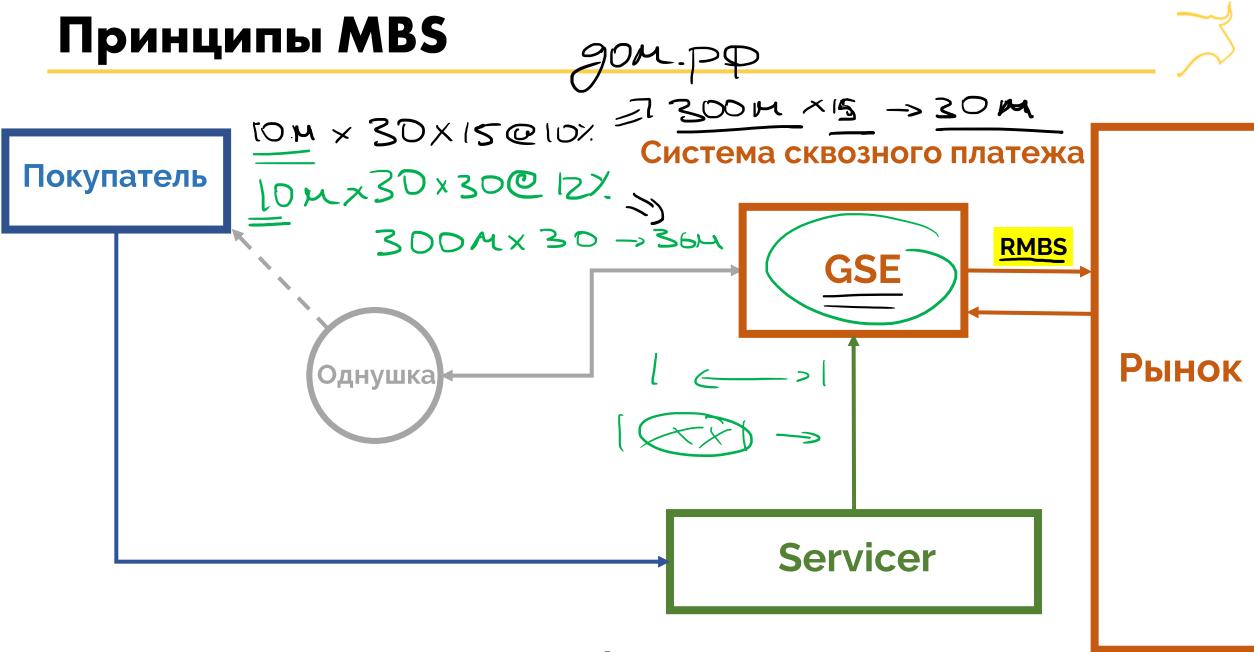






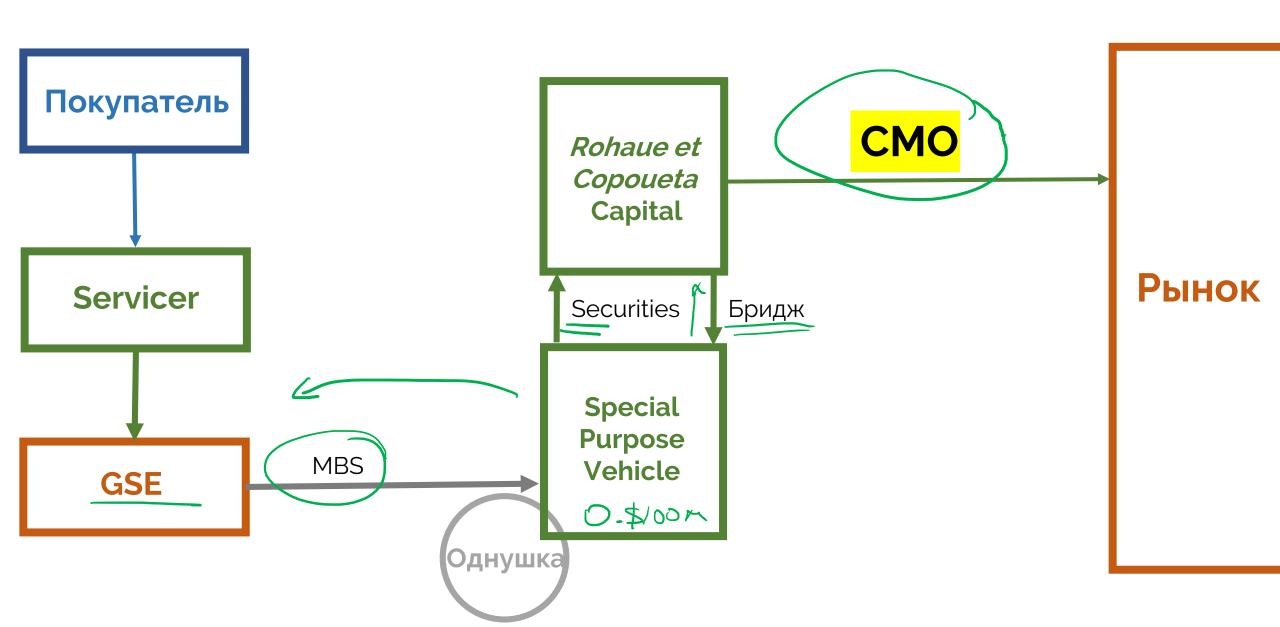




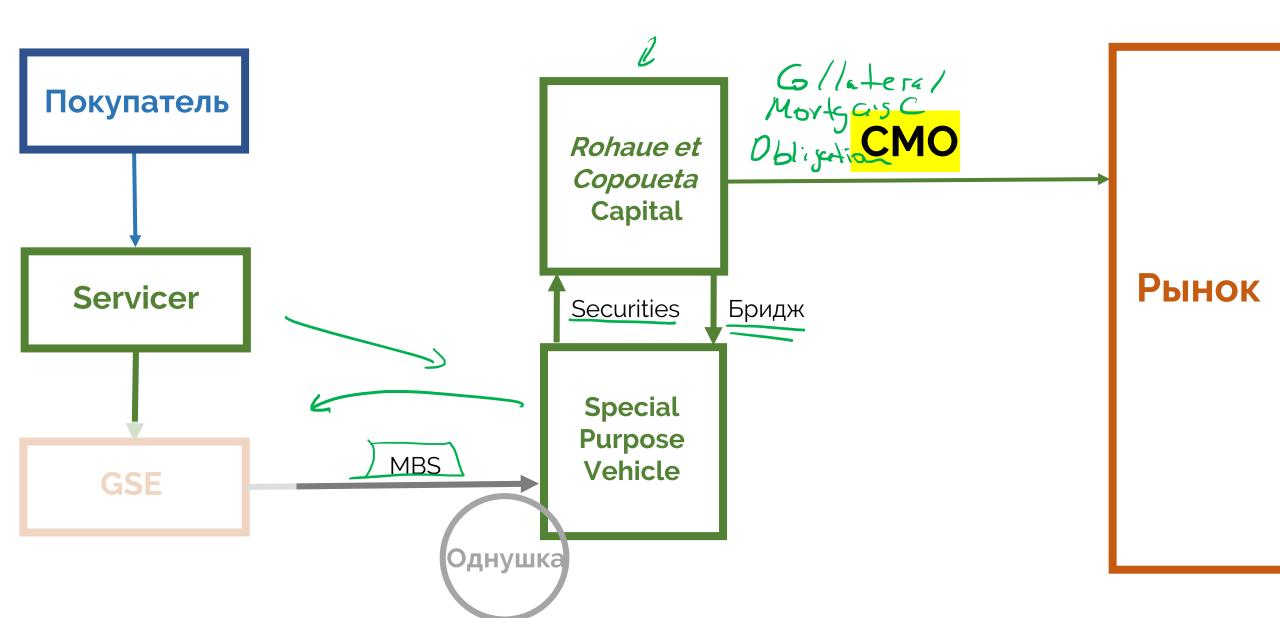


15 или 30 лет фиксированные платеж 🗸













Agency RMBS S Non-Agency RMBS

- GSE
- 1. <u>15</u> or <u>30</u> years fixed
- 2. Monthly Payment ~
- 3. Primary Residence
- 4. All documents <
- 5. Certain Amount 436,000
- 6.No prepayment risk

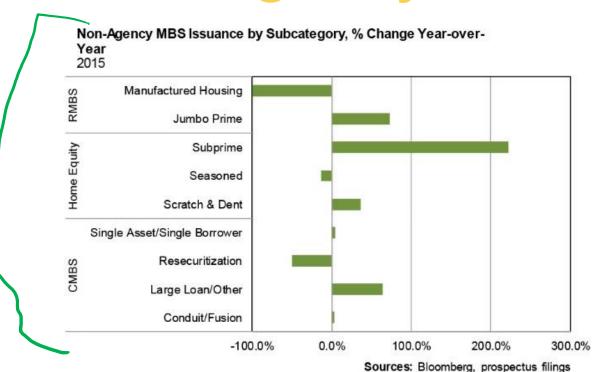
- > \$1M
- 1. Prime (incl. Jumbo)
- 2. Alt-A
- 3. Sub-Prime(B/C)



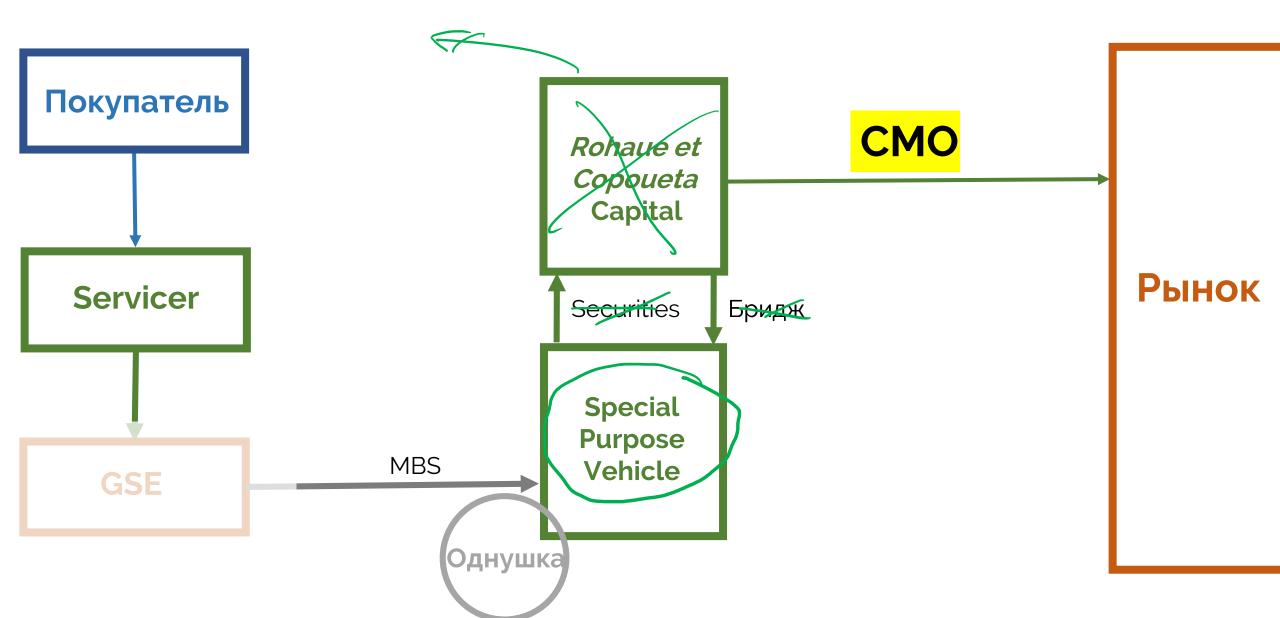
Agency RMBS

- 1. 15 or 30 years fixed
- 2. Monthly Payment
- 3. Primary Residence
- 4. All documents
- 5. Certain Amount
- 6.No prepayment risk

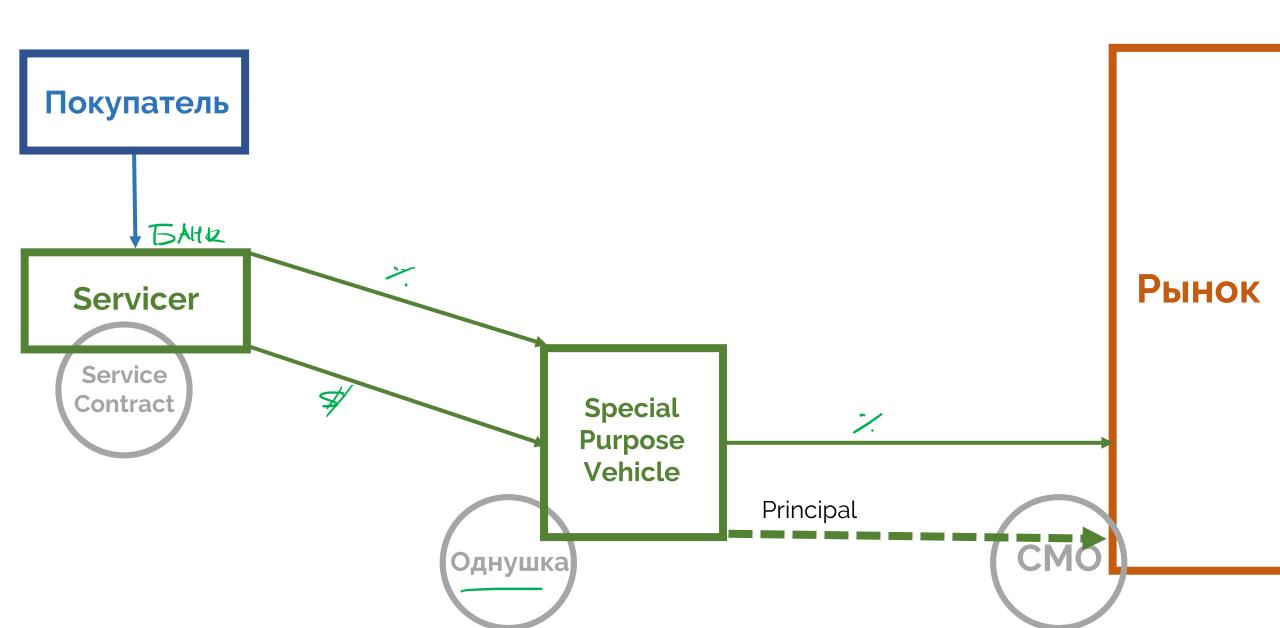
Non-Agency RMBS



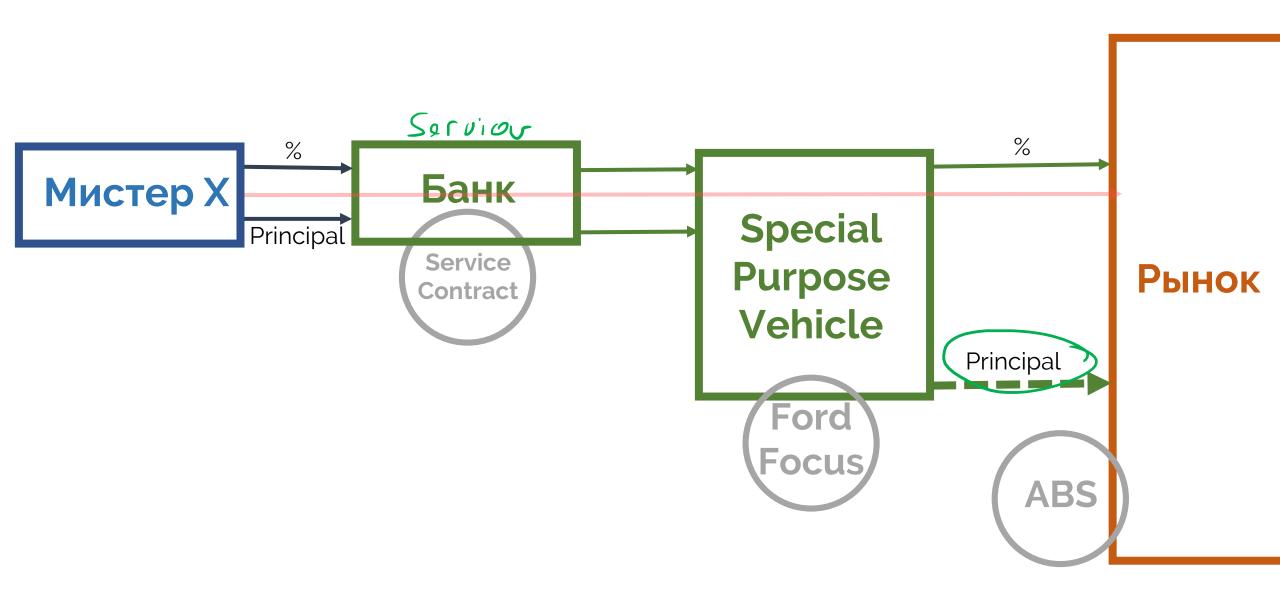




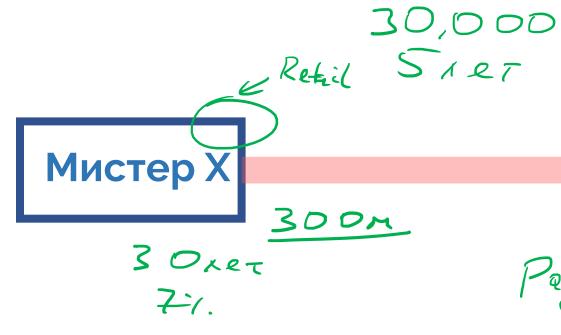












~ 1.317

5,000

$$30 \text{ NeT} \quad \text{PbHOK}$$

$$7/.$$

$$30 \text{ NeT} \quad 30 \text{ NeT} \quad$$



Мистер Х

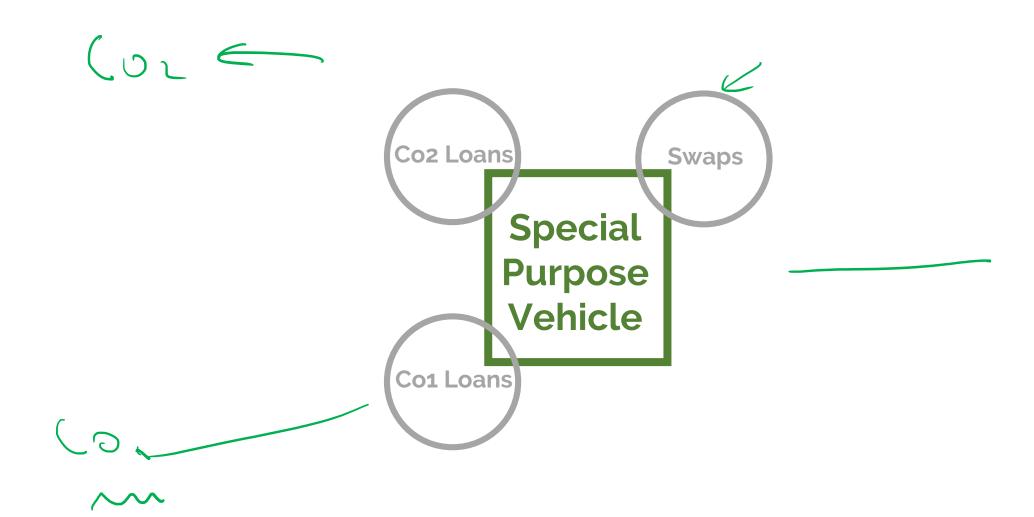
CMO ≠ Pay-Through Phillips

7



Special Purpose Vehicle

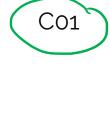












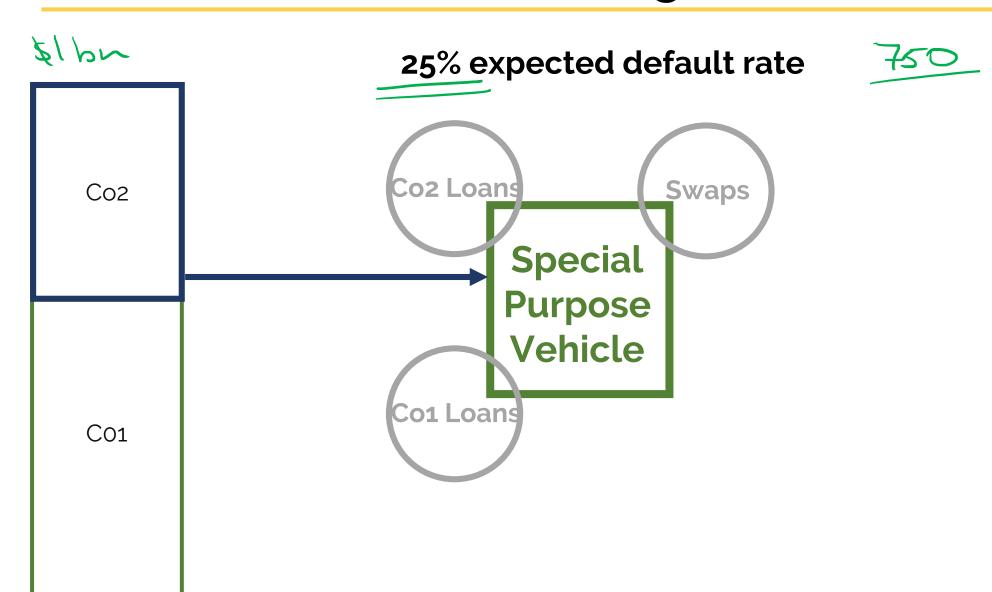
25% expected default rate



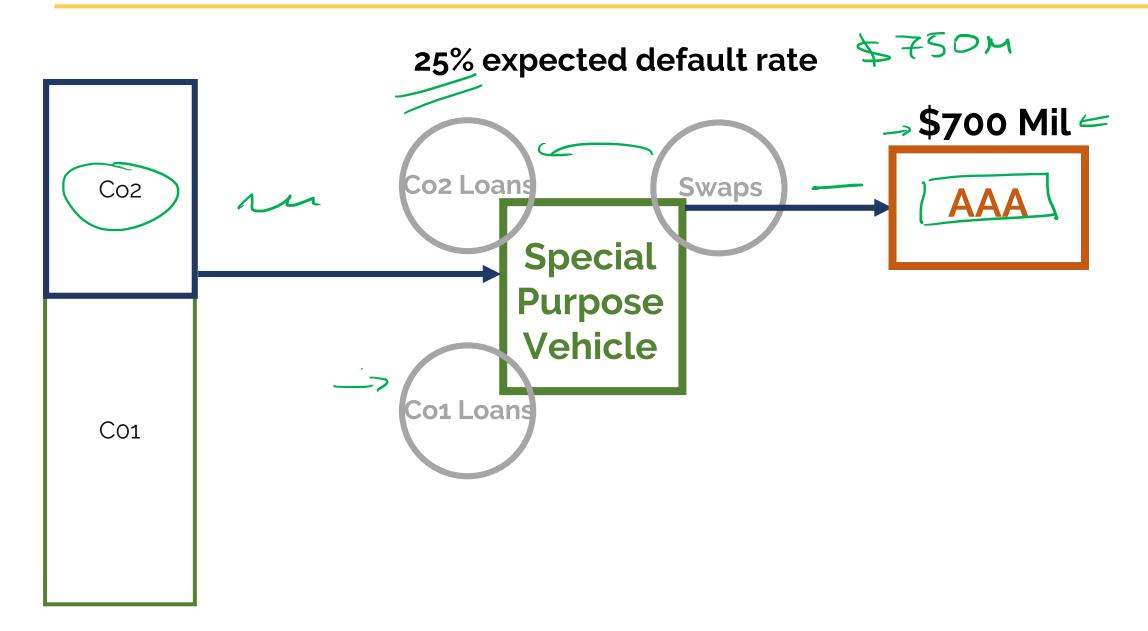
Average Cumulative Issuer-Weighted Global Default Rates, 1970-2007¹

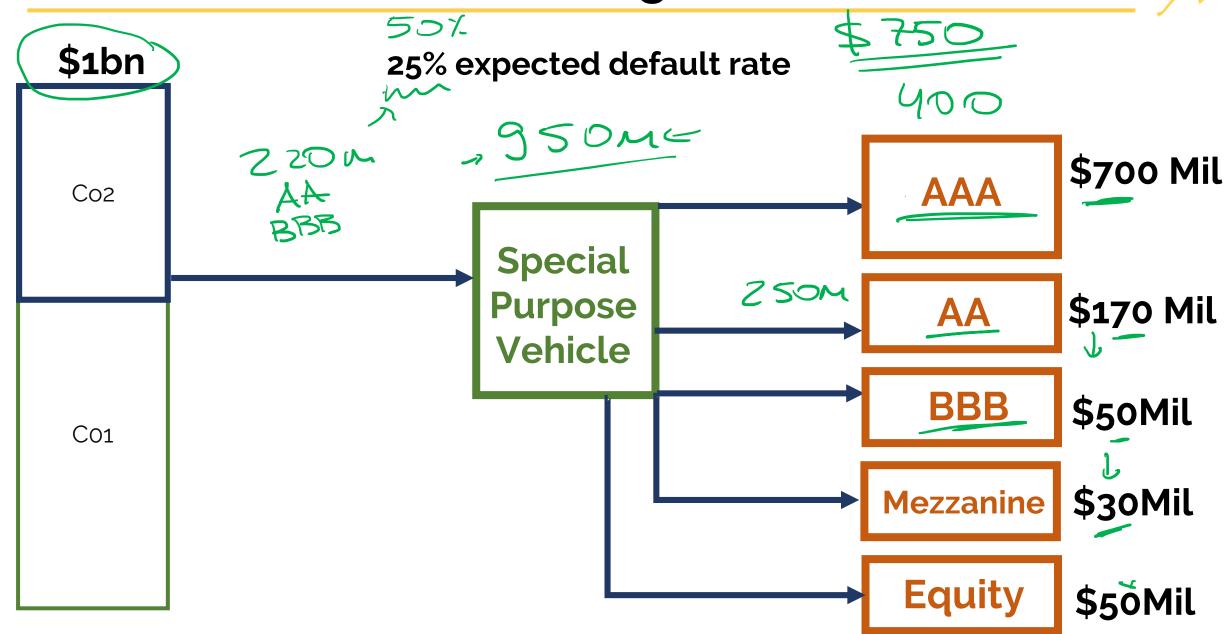
Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0	0	0	0.026	0.100	0.173	0.252	0.336	0.428	0.525
Aa	0.008	0.018	0.042	0.106	0.178	0.261	0.344	0.416	0.463	0.521
A	0.020	0.094	0.218	0.342	0.467	0.612	0.762	0.934	1.120	1.308
Baa	0.170	0.478	0.883	1.360	1.835	2.322	2.794	3.257	3.780	4.353
Ba	1.125	3.019	5.298	7.648	9.805	11.771	13.465	15.084	16.700	18.426
В	4.660	10.195	15.566	20.325	24.692	28.743	32.527	35.734	38.599	40.922
Caa-C	17.723	27.909	36.116	42.603	47.836	51.627	54.539	57.729	61.295	64.928
Investment-Grade	0.065	0.197	0.384	0.603	0.824	1.058	1.287	1.519	1.769	2.036
Speculative-Grade	4.211	8.418	12.446	16.007	19.127	21.868	24.249	26.329	28.251	30.062
All Rated	1.417	2.819	4.135	5.275	6.240	7.072	7.783	8.405	8.985	9.537



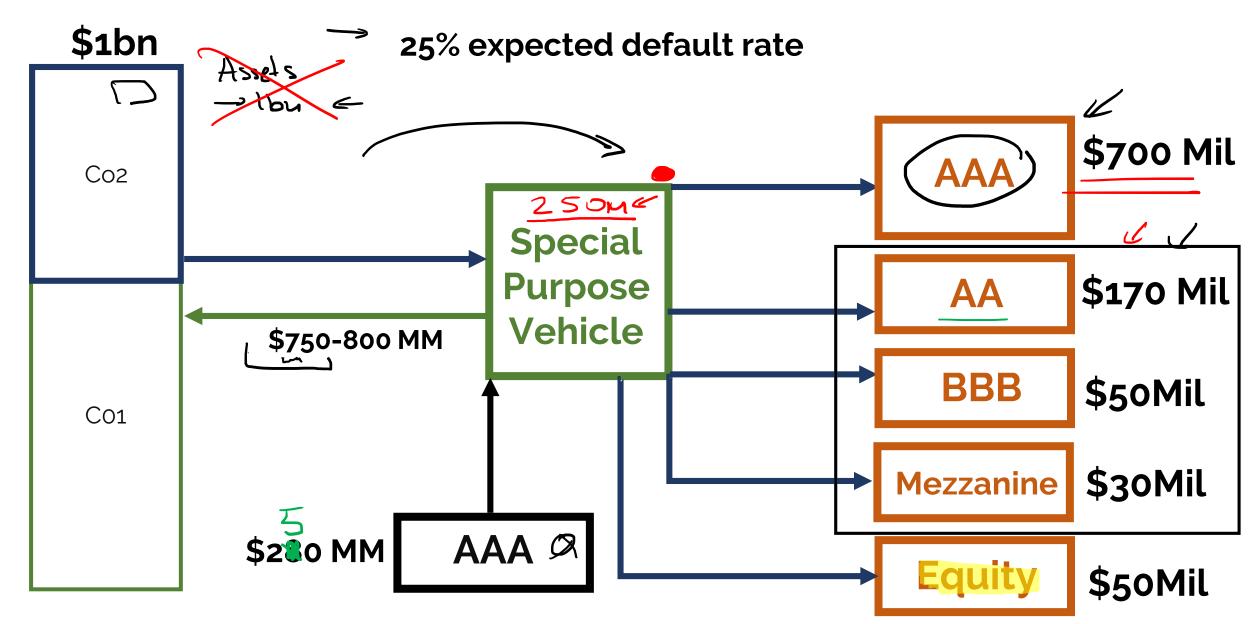




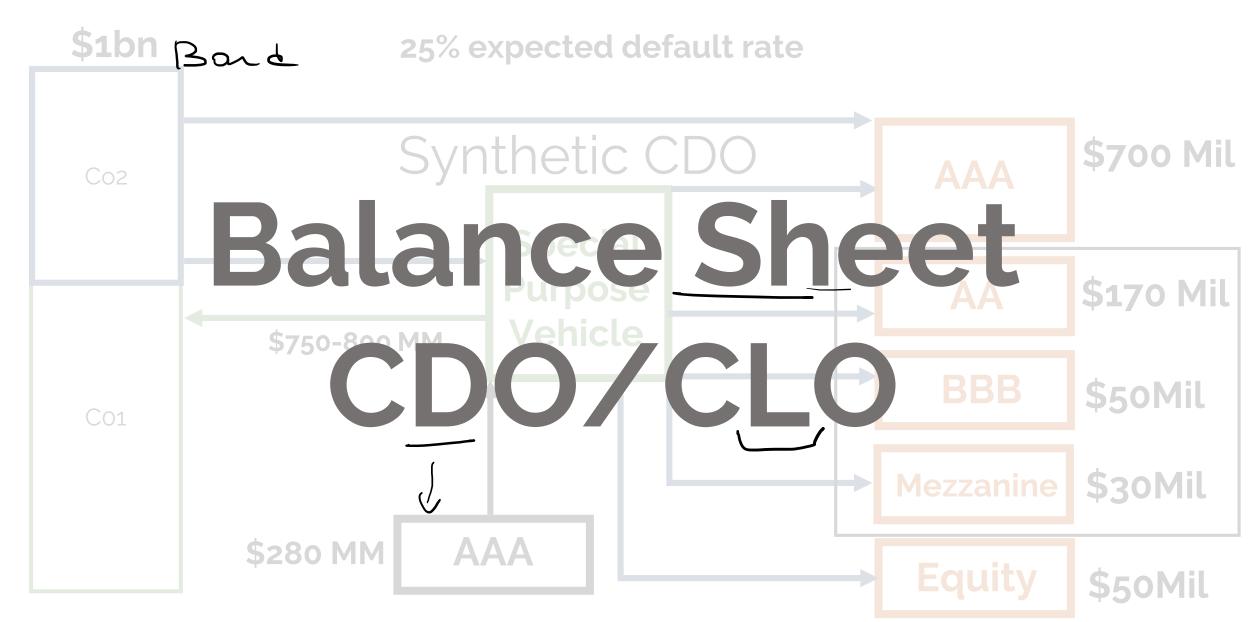




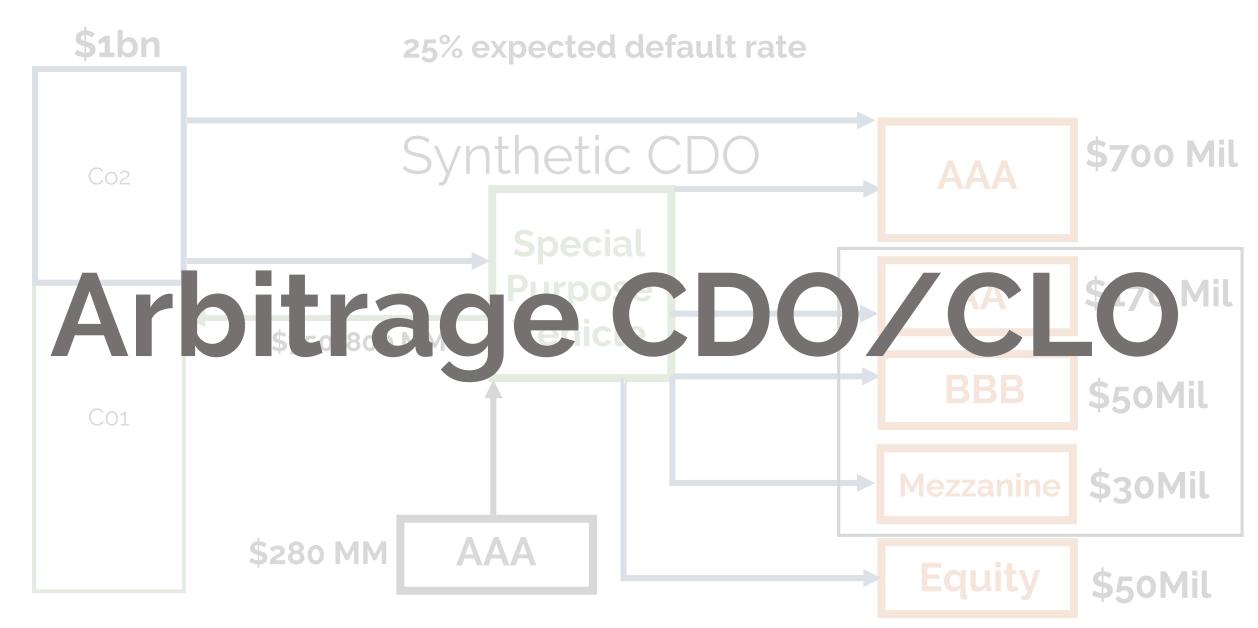




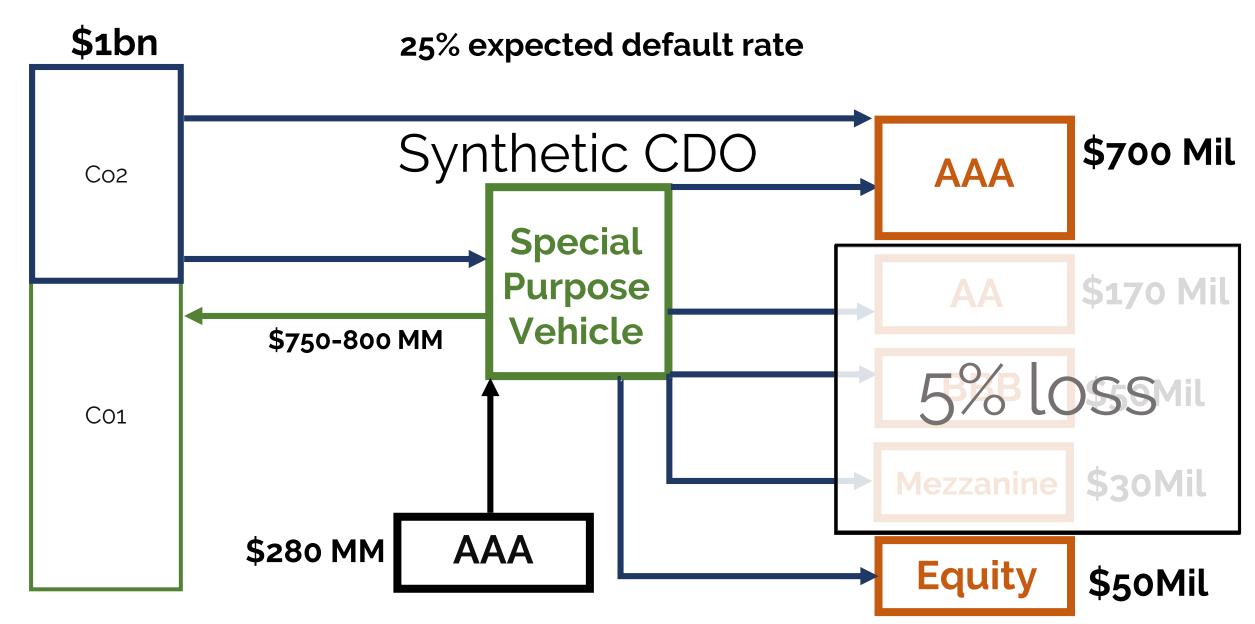




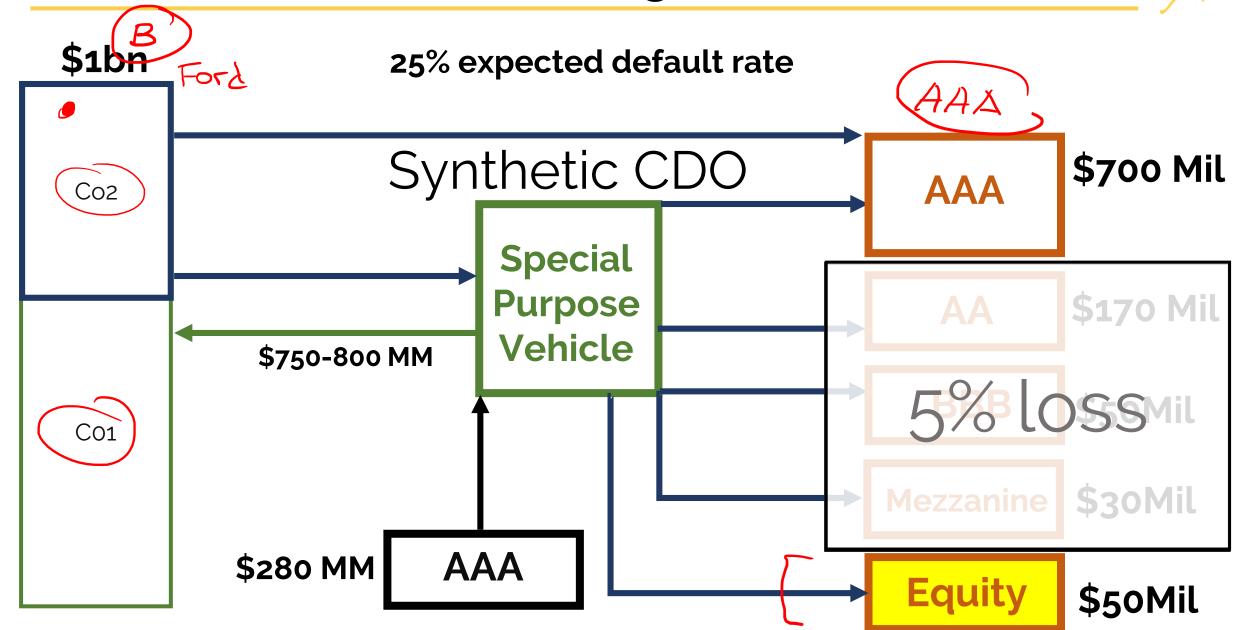










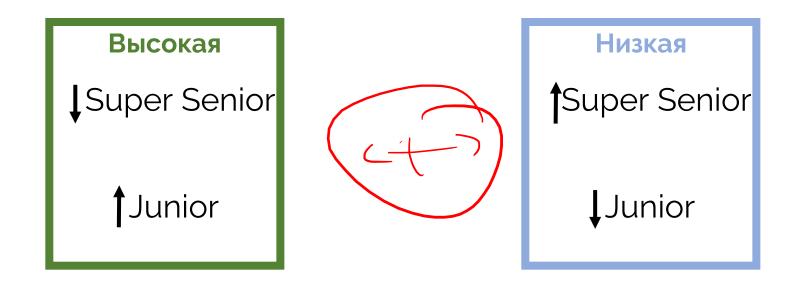




```
CF from loans – 550bps or 55M on 1B portfolio
CF to Investors – 350bps or 35m on 1B portfolio
    Разница = 20,000,000 в год
Возврат на Equity = 40% в год
```

7

- 1. 10-200 Кредитных единиц
- 2. Обычно 5 лет
- 3. !!Корреляция между кредитными единицами!!



CПACИБО!

