



PF2 SECURITIES EVALUATIONS, INC.

Trust Preferred Securities (TruPS) CDO Evaluations



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Guillaume Fillebeen
(212) 918 4947
guillaume.fillebeen@pf2se.com

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Overview of TruPS CDOs

Overview of TruPS CDOs

TruPS enable small banks and insurers to raise capital on a tax-advantaged basis without diluting shareholders' equity:

- Account for up to 25% of Tier 1 Capital (banks)
- Partial treatment as equity capital by rating agencies (insurers)
- Dividends are typically tax deductible

Noteworthy characteristics:

- Subordinate to company debt but senior to equity
- Bullet payment in 30 years with option to call in 5-10 years
- Dividends can be deferred for up to 5 years

Overview of TruPS CDOs

When compared to CDOs backed by corporate debt, CDOs backed by TruPS *seemed* an appealing investment:

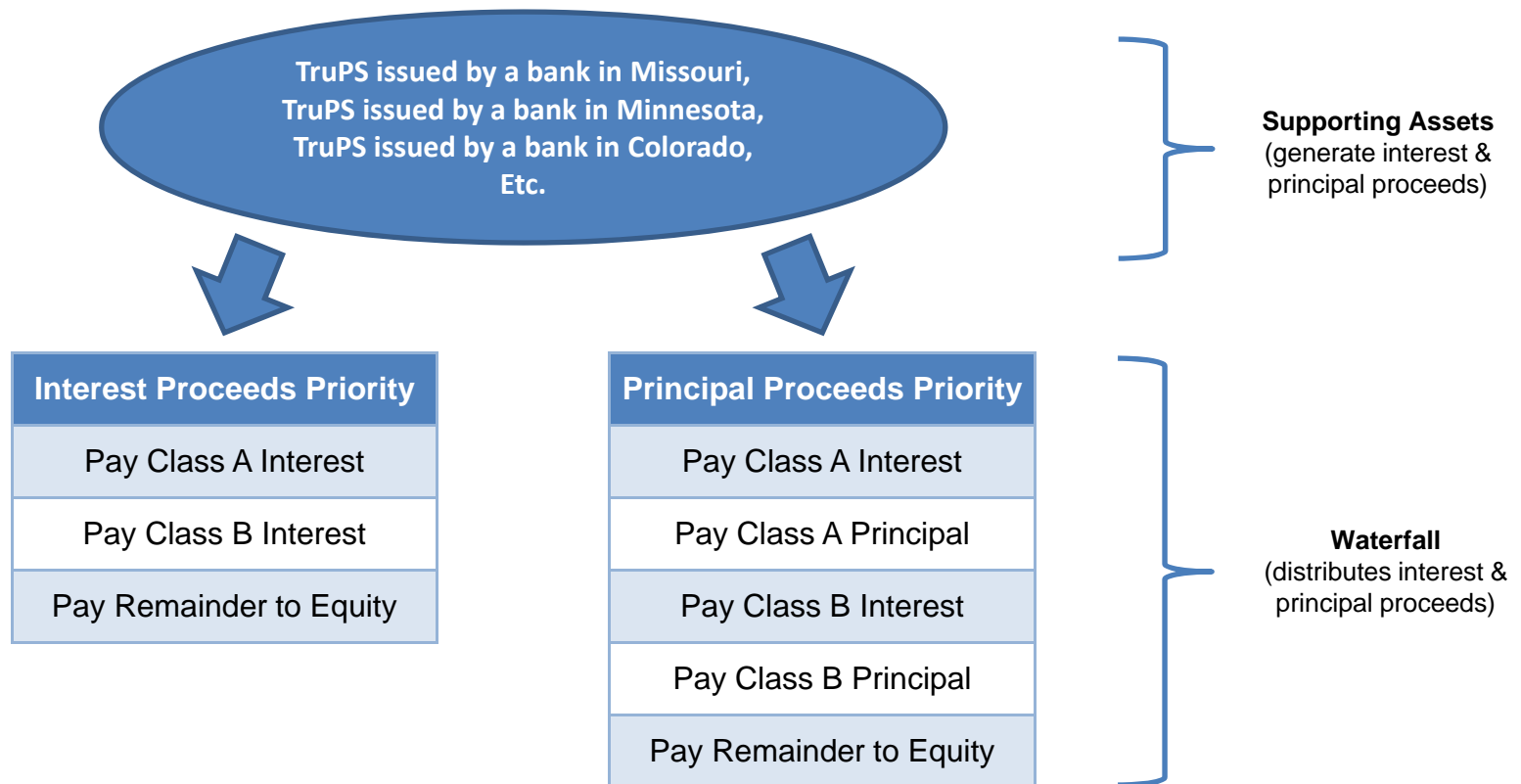
- More heavily regulated underlying assets (banks: FED, FDIC, OCC, OTS; insurers: NAIC)
- Vastly lower historical default rates (vs. unregulated corporations)

The heavy demand for TruPS CDOs gave small issuers increased access to a market where funding was cheap and quasi-unlimited.

Overview of TruPS CDOs

TruPS CDOs are typically backed by pools of 25 to 75 TruPS. Interest and principal proceeds generated from these pools are distributed to each CDO's noteholders according to indenture-specified priorities (the "Waterfall").

Example:



Overview of TruPS CDOs

When the pool deteriorates with issuers deferring and defaulting, structural features embedded in the waterfall modify these priorities.

Example:

Interest Proceeds Priority
Pay Class A Interest
Pay \$X to Class A Principal
Pay Class B Interest
Pay Remainder to Equity

Key Feature: The Senior Overcollateralization (“OC”) Test

Test fails if $(\text{Collateral} / \text{Class A Outstanding}) < (\text{Trigger Level})$

A Trigger Level of 120.00% means that Class A needs to be overcollateralized by at least 20.00%.

Example: If Collateral = \$120 and Class A Outstanding = \$110 then \$10 in Interest Proceeds will be diverted, away from Class B and Equity, to pay down Class A.

Overview of TruPS CDOs

Other typical features:

- Static Pool (no discretionary trading or reinvestment of principal proceeds)
- Optional Redemption (after 5 years)
- Auction Call (after 10 years)
- Interest Rate Hedges (asset-level or deal-level in the form of swaps, caps or floors)
- Interest Coverage Tests
- Excess Spread (50% - 60%) may be diverted to amortize notes sequentially

Overview of TruPS CDOs

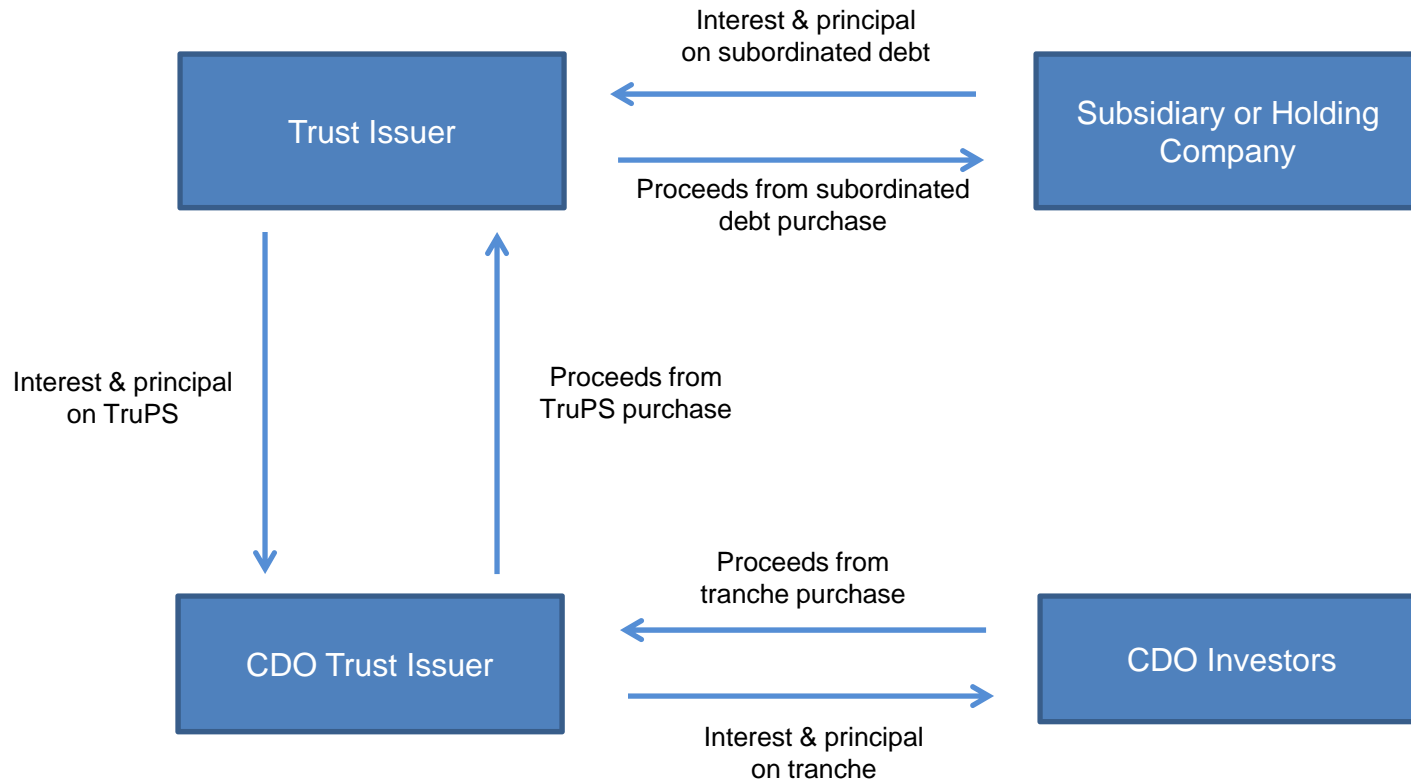
TruPS CDO Issuer Shelves and Asset Class Exposures:

Series Name	Originator(s)
Alesco Preferred Funding	Cohen & Company
Attentus CDO	Kodiak Funding LP
Dekania CDO	Cohen & Company
ICONS	Morgan Stanley
InCapS Funding	Sandler O'Neill & Partners, L.P.
I-Preferred Term Securities	FTN Financial
Kodiak CDO	Sandler O'Neill & Partners, L.P.
MM Community Funding	Sandler O'Neill & Partners, L.P.
MMCapS Funding	Sandler O'Neill & Partners, L.P.
Preferred Term Securities	FTN Financial
Regional Diversified Funding	Citigroup Inc.
Soloso CDO	J.P. Morgan & Co., Inc. / SunTrust Bank
Taberna Preferred Funding	Taberna Capital Management
TPref Funding	Sandler O'Neill & Partners, L.P.
Trapeza CDO	Trapeza Capital Management
Trapeza Edge CDO	Trapeza Capital Management
Tropic CDO	J.P. Morgan & Co., Inc.
U.S. Capital Funding	StoneCastle Partners LLC

Collateral Type	Exposure (\$mm)
Bank and Other	1,200
Bank Only	16,268
Bank, Insurance, REIT/HB/FI	5,885
Bank and Insurance	19,500
REIT/HB/FI	9,829
Insurance Only	6,270
Total	58,952

Overview of TruPS CDOs

Flow-of-funds:



Impact of the Crisis on TruPS CDOs

Impact of the Crisis on TruPS CDOs

Banks and insurers are experiencing significant writedowns due to, among other things, poor performing residential and commercial loans:

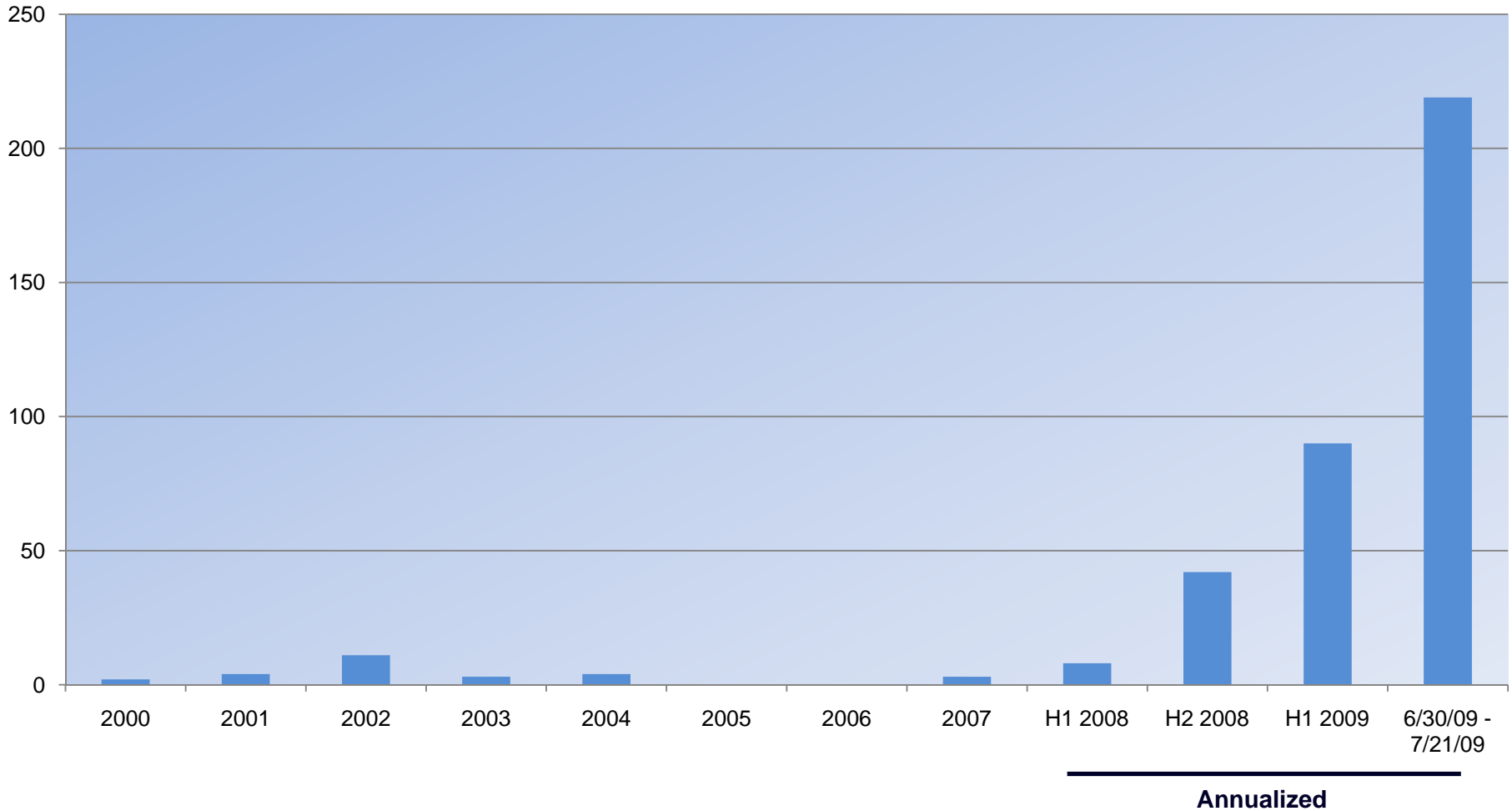
- An increasing number of TruPS are deferring or have defaulted

TruPS CDO Exposure to Deferring and Defaulted Securities				
	12/2007	6/2008	12/2008	6/2009
Average	0.48%	2.98%	7.10%	14.81%
Median	0.00%	5.29%	9.15%	13.99%

- Defaults typically occur when TruPS defer for 5+ years or when issuers fail (failures shown on next slide)

Impact of the Crisis on TruPS CDOs

Number of FDIC-insured Institution Failures by Year



Impact of the Crisis on TruPS CDOs

Impact on TruPS CDOs:

- Impairment of future cashflows
 - Equity is typically “underwater”
 - Junior notes often do not expect to be fully redeemed
- Failing OC tests
 - Deferring and defaulted issuers are usually excluded from the OC’s numerator
 - If senior test fails: senior notes are redeemed while interest to junior notes is capitalized and interest to equity is foregone
 - If junior test fails, senior and junior notes are redeemed sequentially while cashflows to equity are foregone (in certain deals, senior and junior notes are redeemed pro-rata)
- Optional redemptions and auction calls features unlikely to occur
 - Extension risk: noteholders may be exposed to a lengthy legal maturity date (up to 30 years)
- Illiquidity and increased risk premium demanded
 - Higher yields translate into lower fair values on TruPS CDO tranches

Impact of the Crisis on TruPS CDOs

Affect of low interest rate environment on TruPS CDOs:

- Payments to Fixed/Floating Swaps are becoming a huge burden to deals (for more details, see [The Imperfect Hedge](#))

Predatory plays:

- Some deal documents did not anticipate having to protect noteholders in a stressed environment where equity noteholders are “underwater” yet hold critical voting rights (for more details, see [Piercing the Securitization](#))

An Approach to Evaluating a TruPS CDO

An Approach to Evaluating a TruPS CDO

- **Step 1:** Determine each issuer's current default rate
- **Step 2:** Establish reasonable short-term and long-term stresses on current default rates (i.e., default timing profiles)
- **Step 3:** Run pool-level cashflows through a TruPS CDO model to obtain tranche-level cashflows
- **Step 4:** Discount tranche-level cashflows by appropriate rates:
 - Determine whether tranche suffers impairment
 - Determine tranche's fair value

An Approach to Evaluating a TruPS CDO

Step 1: Determine each issuer's current default rate:

Issuer	Category*
Trustco Bankshares, Inc.	Good
Western Oklahoma Bancshares, Inc.	Good
1st Jackson Bancshares, Inc.	Average
Alliance Financial Corporation	Average
Aliant Financial Corporation	Weak
Amcore Bank, NA	Weak
First Chicago Bancorp	Troubled
Sun West Capital Corporation	Troubled
Century Financial Group, Inc.	Deferring
Sturm Financial Group, Inc.	Deferring
Pine City Bancorporation, Inc.	Defaulted
Stampede Holdings, Inc.	Defaulted

Category	Current Default Rate	Description
Good	0.36%	Historical Average
Average	1.10%	Current Default Rate*
Weak	4.77%	Equivalent to Caa1 Rating
Troubled	8.07%	Equivalent to Caa3 Rating

* As of 06/30/09; Categories can be estimated by analyzing issuers' profitability, credit quality, capital adequacy, leverage and liquidity ratios.

An Approach to Evaluating a TruPS CDO

Step 2: Establish reasonable short-term and long-term stresses on current default rates (i.e., default timing profiles)

Example:

- Improving case: default rates increase 35% over 1 year; 1 year flat; then back to historical average
- Base case: default rates increase 50% over 2 years; 1 year flat; then back to historical average
- Stressed case: default rates increase 100% over 3 years; 1 year flat; then back to historical average

An Approach to Evaluating a TruPS CDO

Step 3: Run pool-level cashflows through TruPS CDO model to obtain tranche-level cashflows:

- Model deal liability structure:

Tranche	CUSIP	MCO/SP/Fitch	Par Orig. (\$)	Par Cur. (\$)	Coupon Orig.	OC Test	IC Test
A1	XXXXXXXXXX	Baa3/BBB/AA	577,800,000	562,372,740	3mL + 0.30%		
A2	XXXXXXXXXX	Ba1/BB/BBB	152,800,000	150,798,320	3mL + 0.38%	Fail	N/A
B1	XXXXXXXXXX	Caa3/NR/BB	85,800,000	85,345,260	3mL + 0.58%		
B2	XXXXXXXXXX	Caa3/NR/BB	20,000,000	20,274,000	5.39%	Fail	N/A
C1*	XXXXXXXXXX	Ca/NR/CC	65,650,000	65,459,615	3mL + 1.05%		
C2	XXXXXXXXXX	Ca/NR/CC	54,250,000	55,118,000	5.86%	Fail	N/A
D	XXXXXXXXXX	NR/NR/C	68,850,000	70,640,100	3mL + 2.00%	Fail	N/A
Equity	XXXXXXXXXX	NR/NR/NR	76,100,000	76,100,000	Residual		

* Tranche evaluated.

- Model deal waterfall:

Example: 60% of excess spread is diverted to amortize the notes sequentially*

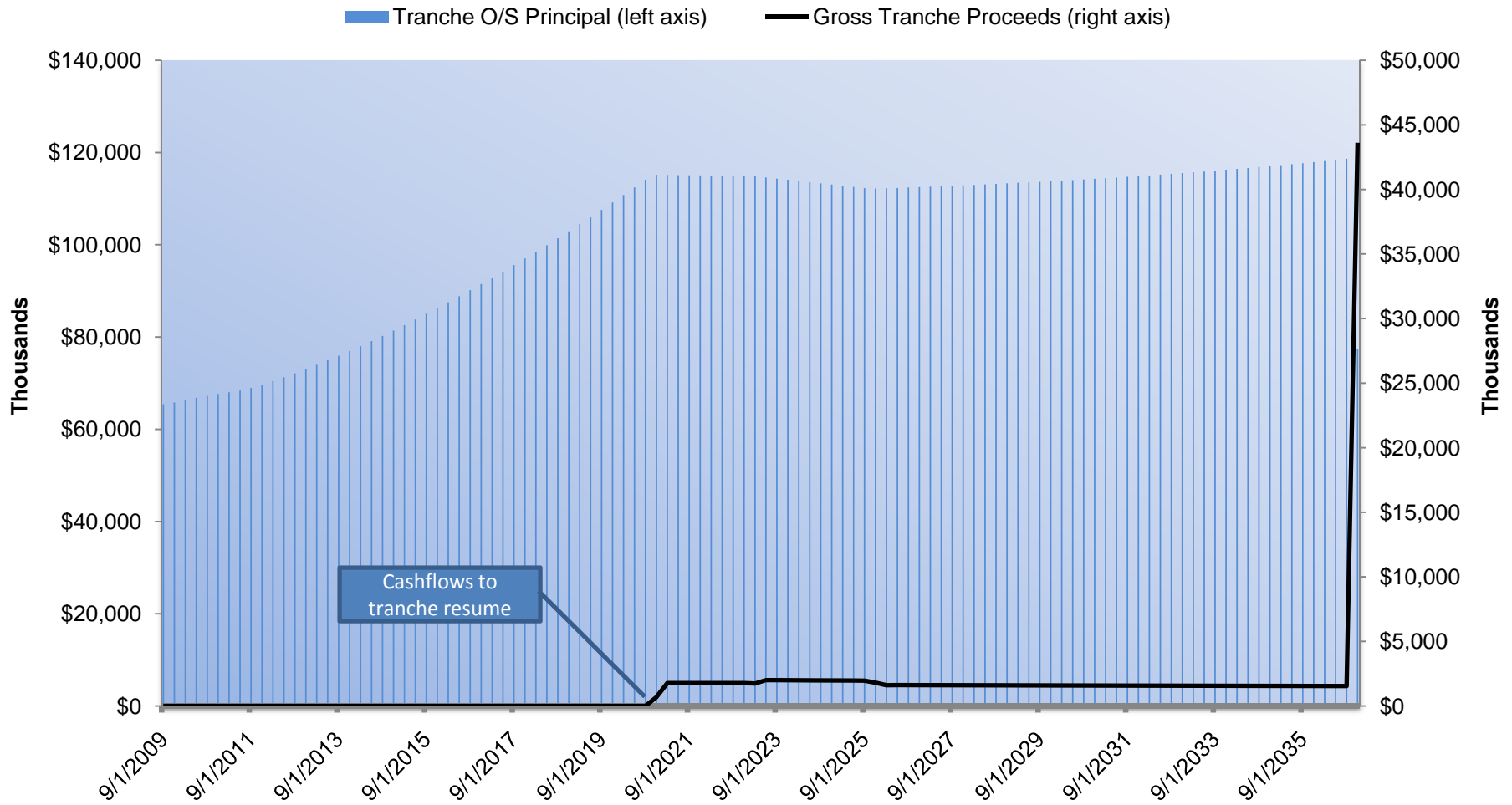
```

If nextPay >= "12/22/2016" Then
  transfer IP, temp, 0.6 * IP
  paid = paySequential(temp, 0, False, True, True, tranches("A1"), tranches("A2"))
  paid = payProRata(temp, 0, False, True, True, tranches("B1"), tranches("B2"))
  paid = payProRata(temp, 0, False, True, True, tranches("C1"), tranches("C2"))
  paid = tranches("D").payDeferred(temp, 0)
  paid = tranches("D").payPrincipal(temp, 0)
  transfer temp, IP
End If
  
```

* Code extracted from PF2's *ProForma2*TM model

An Approach to Evaluating a TruPS CDO

Cashflows to Tranche C1 (base case)



An Approach to Evaluating a TruPS CDO

Step 4: Discount tranche-level cashflows by appropriate rates

Tranche C1 Impairment Analysis (base case):

HTM*	74.33%
Credit Impairment	25.67%
Non-credit Impairment	69.53%

Fair Value**	4.79%
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WAL (yrs)	27.31
Duration (yrs)	15.78
Principal Window	12/22/36 - 12/22/36
Yield / IRR	21.26%

* Discounted at client's purchase yield (above LIBOR for floating portion of tranche coupon)

** Discounted at a rate of 17.00% above LIBOR

Note: above table assumes amortized cost basis of 100.00%

In accordance with FAS 115-2 and FAS 124-2

“Other than temporary” impairment losses are separated into two components:

- OTTI related to credit loss (may be recognized in Earnings)
- OTTI related to other factors (may be recognized in Accumulated Other Comprehensive Income)

In accordance with FAS 157

Note that the value of a TruPS CDO tranche may be significantly lower due to the lengthy anticipated time to cashflow as represented by the duration and weighted average life on the left hand side.

Resources

Websites:

- www.pf2se.com
- www.cdodatabase.com

Related Research:

- [TruPS CDO Report H1 2009](#)
- [TruPS CDO Report 2008](#)

Related Blogs:

- [Piercing the Securitization](#)
- [The Imperfect Hedge](#)
- [The Price is \(not that\) Right](#)

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