

DFAST Solutions from ZMFS

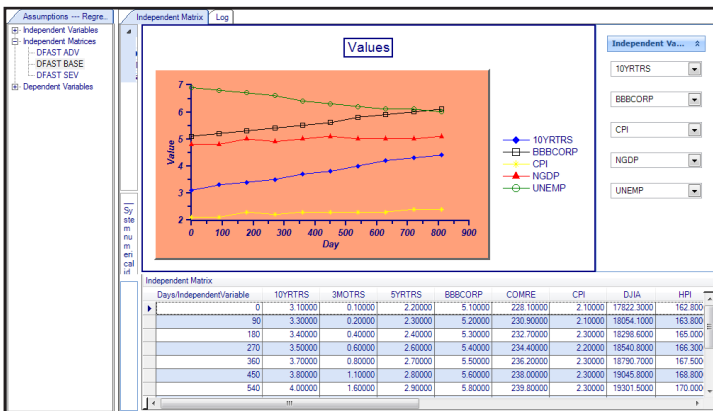
INTEGRATED SOLUTION TO MEET COMPLEX REGULATORY REPORTING REQUIREMENTS

ZMdesk™ from ZM Financial Systems (ZMFS) continues to evolve to help financial professionals demonstrate compliance through ZMdesk's expanded default shocked/stressed scenarios. Now with included DFAST scenarios and expanded default modeling, the complex process of calculating DFAST results is much less cumbersome. Our DFAST solutions include:

- Pre-loaded DFAST time series scenarios
- Ability to enter other user defined default drivers (e.g., price of oil)
- Create run scenario that uses DFAST stressed scenarios
- Generalize behavioral formula builder to accept a wide variety of PD and LGD constants, vectors, tables or statistical formulas like regression
- Ability to set default formula at individual instrument level
- Generate
 - Default adjusted cash flows for each scenario
 - Default adjusted income statement and balance sheets
 - DFAST 10-50 report for each scenario

Pre-Loaded DFAST Time Series Scenarios

- Base, Adverse, and Severe scenarios are pre-loaded into system
- Users can also add additional default drivers (e.g., price of oil)

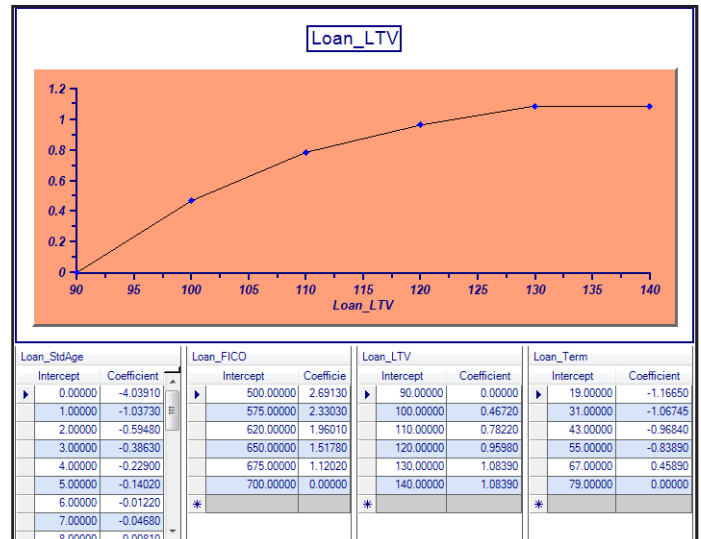


Create Run Scenarios

- One run scenario can process the three DFAST scenarios simultaneously

Enter Default Projection Formulas

- Users can choose DFAST or other drivers used by default forecast equation
- Here Age, FICO, LTV and Term are used



Load Data Once

- During data loading process, users can attach any default model type to each instrument
- Each ALM account is mapped to DFAST/CALL report

Run Bank under DFAST Scenario

- Each instrument will be run with the assigned default model to generate default adjusted cash flows for each scenario

DFAST Solutions from ZMFS



Generate Default Adjusted Cash Flows

- Cash flows reflect projections of defaults and recoveries

Cnt	Date	BeginBal	CPR	SMM	CDR	Severity	PrSched	PrNonSched	PrDefault	PrRecovery	PrnPmt	PrnPmt	TotalPmt
0	08/15/2014	4000000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	08/15/2014	4000000.00	2.34	0.20	1.00	75.00	482.80	786.87	334.87	0.00	1269.67	1666.67	2936.34
2	09/30/2014	398935.46	3.12	0.26	1.00	75.00	483.45	1048.40	333.53	0.00	1531.85	1659.98	3191.83
3	10/31/2014	396530.08	3.89	0.33	1.00	75.00	483.78	1305.63	331.97	0.00	1789.40	1652.21	3441.61
4	11/30/2014	394408.71	4.44	0.38	1.00	75.00	483.79	1487.83	330.19	0.00	1971.62	1643.37	3614.99
5	12/31/2014	392106.90	4.55	0.39	1.00	75.00	483.56	1516.38	328.26	0.00	1999.95	1633.78	3633.72
6	01/31/2015	389778.69	5.17	0.44	1.00	75.00	483.29	1718.45	326.31	0.00	2201.74	1624.08	3825.82
7	02/28/2015	387250.64	5.47	0.47	1.00	75.00	482.75	1808.52	324.20	0.00	2289.27	1613.54	3902.81
8	03/31/2015	384637.17	6.15	0.53	1.00	75.00	482.09	2024.72	322.01	0.00	2506.82	1602.65	4109.47
9	04/30/2015	381808.34	7.64	0.66	1.00	75.00	481.15	2515.85	319.64	0.00	2996.99	1590.87	4587.86
10	05/31/2015	378491.71	9.43	0.82	1.00	75.00	479.56	3104.17	316.86	0.00	3583.73	1577.05	5160.78
11	06/30/2015	374591.11	10.73	0.94	1.00	75.00	477.20	3518.26	313.60	0.00	3995.46	1560.80	5556.26
12	07/31/2015	370282.05	11.64	1.03	1.00	75.00	474.28	3791.52	309.99	0.00	4265.80	1542.84	5908.65
13	08/31/2015	365706.26	12.43	1.10	1.17	75.00	470.91	4013.56	307.46	83.72	4588.19	1523.78	6091.97
14	09/30/2015	360864.32	13.25	1.18	1.33	75.00	467.15	4238.98	303.43	83.38	4789.51	1503.60	6293.11
15	10/31/2015	355754.76	13.91	1.24	1.50	75.00	462.99	4402.61	301.61	82.99	4948.59	1482.31	6430.90
16	11/30/2015	350441.39	14.24	1.27	1.67	75.00	458.50	4445.93	300.48	82.55	4986.98	1460.17	6447.15
17	12/31/2015	345046.47	13.60	1.21	1.83	75.00	453.86	4167.01	301.64	82.07	4702.94	1437.69	6140.63
18	01/31/2016	339893.97	14.09	1.26	2.00	75.00	449.47	4262.48	301.75	81.58	4793.53	1416.22	6209.75
19	02/29/2016	334610.27	13.82	1.23	2.17	75.00	444.85	4109.41	302.24	81.05	4635.31	1394.21	6029.52
20	03/31/2016	329445.76	14.40	1.29	2.33	75.00	440.34	4226.82	307.54	80.50	4747.66	1372.69	6091.97
21	04/30/2016	324131.06	16.37	1.50	2.50	75.00	435.56	4829.70	303.14	79.91	5355.17	1350.53	6205.71
22	05/31/2016	318172.67	18.84	1.72	2.67	75.00	429.85	5467.37	315.84	79.22	5976.44	1325.72	7302.16
23	06/30/2016	311559.60	19.57	1.80	2.83	75.00	423.18	5882.07	345.36	78.40	6083.65	1296.17	7381.82
24	07/31/2016	304808.99	19.47	1.79	3.00	75.00	416.25	5428.77	372.71	77.50	5922.51	1270.04	7192.55
25	08/31/2016	298191.27	19.13	1.75	2.99	75.00	409.47	5209.58	374.03	80.37	5708.42	1242.46	6950.88
26	09/30/2016	291818.19	18.92	1.73	2.99	75.00	402.95	5035.94	376.05	100.88	5339.74	1215.91	6755.65
27	10/31/2016	285445.26	18.42	1.68	2.98	75.00	396.41	4784.49	378.46	111.95	5295.05	1190.18	6485.23
28	11/30/2016	279744.50	17.65	1.61	2.97	75.00	390.58	4474.01	372.02	122.62	4987.22	1165.59	6152.81
29	12/31/2016	274174.88	15.81	1.42	2.96	75.00	384.95	3889.72	368.31	132.91	4407.58	1142.40	5549.97
30	01/31/2017	269213.90	15.37	1.38	2.96	75.00	380.10	3702.78	372.17	142.94	4225.82	1121.72	5347.54
31	02/28/2017	264458.85	14.26	1.27	2.95	75.00	375.47	3355.54	368.62	152.56	3883.57	1101.91	4985.49
32	03/31/2017	260069.22	14.16	1.26	2.94	75.00	371.31	3275.32	366.03	161.89	3808.51	1083.62	4892.13
33	04/30/2017	255776.57	15.57	1.40	2.93	75.00	367.23	3568.30	333.73	170.78	4106.31	1065.74	5172.05

Default Impacted Financial Statements

- Users can generate default adjusted income statement and balance sheets
- Defaults on 3/31/15 impact carrying book value, income statement and ultimately capital

1	DFAST Bank	Standard ZMFS Balance Sheet and Income Statement											
2	Adverse Scenario	9/30/2014	10/31/2014	11/30/2014	12/31/2014	1/31/2015	2/28/2015	3/31/2015	4/30/2015	5/31/2015	6/30/2015		
3	Asset												
4	Overnight Investment		175,691	281,370	177,249	3,627		1,697,053	1,488,615	1,273,397	1,085,649		
5	Investment (Total)												
6	Real Estate Fixed	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	5,848,077	5,848,077	5,848,077	5,848,077		
7	Consumer Fixed	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	2,924,038	2,924,038	2,924,038	2,924,038		
8	HELOC	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,462,019	1,462,019	1,462,019	1,462,019		
9	1-4 Family Constr	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	3,898,718	3,898,718	3,898,718	3,898,718		
10	Automobile Loans	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	1,949,359	1,949,359	1,949,359	1,949,359		
11	Credit Card	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	974,679	974,679	974,679	974,679		
12	Multifamily Loans	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	9,746,794	9,746,794	9,746,794	9,746,794		
13	Loans (Total)	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	27,500,000	26,803,684	26,803,684	26,803,684	26,803,684		
14	Securities (Total)	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000	42,500,000		
15	Other (Total)							1,980,748	1,906,222	1,831,739	1,757,214		
16	AFS TV Adjustment	2,433,530	2,357,885	2,282,235	2,206,590	2,131,328	2,056,010						
17	Deferred Tax on AFS							11,303	350,385	689,556	1,028,815		
18	Accrued Interest Receivable	11,413	353,791	696,206	1,038,621	1,381,040	1,723,497	11,303	350,385	689,556	1,028,815		
19	Total Asset	72,444,943	72,887,368	73,259,811	73,422,461	73,515,995	73,779,507	72,992,789	73,048,907	73,098,377	73,175,363		
20	Liability												
21	Capital												
22	Common Stock	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000		
23	Other Equity Adjustments												
24	Unrealized G/L on AFS	2,433,530	2,357,885	2,282,235	2,206,590	2,131,328	2,056,010	1,980,748	1,906,222	1,831,739	1,757,214		
25	Initial G/L on Trading	11,413	529,483	977,576	1,215,817	1,384,667	1,522,789	1,012,041	1,142,686	1,266,638	1,418,149		
26	Retained Earnings	72,444,943	72,887,368	73,259,811	73,422,461	73,515,995	73,779,507	72,992,789	73,048,907	73,098,377	73,175,363		
27	Total Liability & Capital	72,444,943	72,887,368	73,259,811	73,422,461	73,515,995	73,779,507	72,992,789	73,048,907	73,098,377	73,175,363		
28	Income Statement												
29	Interest Income		342,378	342,415	342,416	342,419	342,457	342,376	339,083	339,171	339,259		
30	Interest Expense												
31	Net Interest Income		342,378	342,415	342,416	342,419	342,457	342,376	339,083	339,171	339,259		
32	Provision for Loan Losses							696,310					
33	Noninterest Income												
34	Noninterest Expense												
35	Noninterest Income (Total)		622,500	552,500	342,700	273,200	242,500	290,000	237,250	230,500	258,000		
36	Net Servicing Fees												
37	Noninterest Expense (Total)		344,000	344,000	344,000	344,000	344,000	344,000	344,000	344,000	344,000		
38	Income Before Tax		620,878	550,915	341,116	271,619	240,957	(407,840)	232,333	225,671	253,259		
39	Income Tax		102,809	102,821	102,821	102,822	102,835	102,809	101,688	101,718	101,748		
40	Extraordinary Items												
41	Net Income		518,070	448,094	238,294	168,796	138,121	(510,749)	130,645	123,953	151,511		

Generate DFAST 10 50 Report Automatically

In addition to providing required reporting information automatically, ZMdesk also helps financial institutions with better overall management of balance sheets and risk portfolios, providing a broad range of instrument-level and full balance sheet-level analytics. And, ZMdesk's unique reporting capabilities helps financial professionals prepare for audits and submitting reports not only for regulatory requirements, but for providing secure information to their stakeholders as well.

OCC DFAST 10-50 - Adverse Scenario					
Balance Sheet Statement for DFAST ExampleBk					
OCC Charter ID #####					
(Dollar Amounts in Thousands)					
Balance Sheet Statement Impacts	Actual	Projected	Year 1: 2015 -- Projected (in the q)		
	As of 9/30	As of 12/31	Q1	Q2	Q3
Loans (excluding FDIC Loss Sharing Agreements)					
First lien mortgages	6,000	6,000	5,848	5,848	5,700
Closed-end junior liens	0	0	0	0	0
HELOCs	1,500	1,500	1,462	1,462	1,425
C&I loans	0	0	0	0	0
1-4 family construction loans	4,000	4,000	3,899	3,899	3,800
Other construction loans	0	0	0	0	0
Multifamily loans	10,000	10,000	9,747	9,747	9,500
Non-farm, non-residential owner occupied loans	0	0	0	0	0
Non-farm, non-residential other loans	0	0	0	0	0
Credit cards	1,000	1,000	975	975	950
Automobile loans	2,000	2,000	1,949	1,949	1,900
Other consumer	3,000	3,000	2,924	2,924	2,850

OCC DFAST 10-50 - Adverse Scenario
Income Statement for DFAST ExampleBk
OCC Charter ID #####
(Dollar Amounts in Thousands)

Income Statement Impacts	Projected	Year 1: 2015 -- Projected (in the quarter)			
	As of 12/31	Q1	Q2	Q3	Q4
Net Charge-Offs					
First lien mortgages	0	152	0	148	
Closed-end junior liens	0	0	0	0	
HELOCs	0	38	0	37	
C&I loans	0	0	0	0	
1-4 family construction loans	0	101	0	99	
Other construction loans	0	0	0	0	
Multifamily loans	0	253	0	247	
Non-farm non-residential owner occupied loans	0	0	0	0	
Non-farm non-residential other loans	0	0	0	0	
Credit cards	0	25	0	25	
Automobile loans	0	51	0	49	
Other consumer	0	76	0	74	
All other loans and leases	0	0	0	0	
Total loan and lease net charge offs	0	696	0	679	
Net interest income	1,027	1,027	1,018	1,018	
Non-interest income	1,518	806	726	1,025	
Non-interest expense	1,032	1,032	1,032	1,032	
Pre-provision net revenue	1,513	801	711	1,011	
Provision for loan and lease losses	0	696	0	679	
Realized gains (losses) on HTM securities	0	0	0	0	
Realized gains (losses) on AFS securities	0	0	0	0	
All other gains (losses)	0	0	0	0	
Taxes	308	308	305	305	
Net income	1,204	-204	406	27	

Get in front of regulatory reporting with an integrated solution, instead of being left behind. Schedule a demo with us today.

Contact us via:

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About ZM Financial Systems

ZM Financial Systems brings practical solutions to complex financial problems, offering complete solutions in securities and fixed-income analytics, credit-adjusted ALM, liquidity, risk management, budgeting and funds transfer pricing. We also offer large bank solutions to meet the evolving regulatory risk reporting requirements.

With 1,500 institutions depending on ZMFS products/analytics to identify, measure and monitor risk and value in their balance sheets, we are one of the fastest growing financial software companies in the U.S.

Founded in 2003, ZMFS is a privately-held corporation headquartered in Cary, N.C. In addition to the 25 percent of our staff who have PhD's in the advanced quantitative field, our development and product support teams all have experience in the finance arena. Because our teams continuously collaborate, we can quickly navigate complex solutions to complete client-requested enhancements in days or weeks, versus months or years.

Delivering state-of-the-art risk/reward analysis tools, such as ZMdesk, OnlineALM.com™ and OnlineBondSwap.com™, our clients are empowered to uncover hidden risk while maximizing performance; test lending, investment and funding strategies; and respond to various regulatory requirements while efficiently delivering actionable information.

