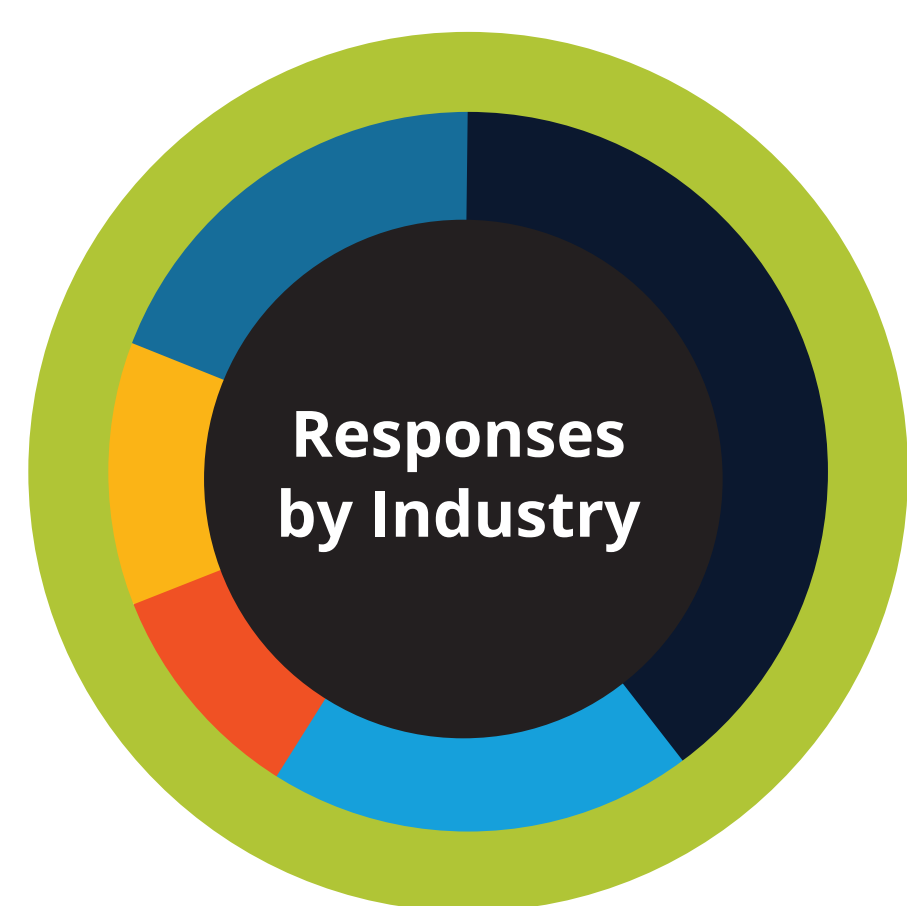


In May and June 2015, GARP and SAS surveyed a global sample of 389 risk practitioners to gauge their attitudes toward regulatory stress testing requirements and their maturity levels in responding to them.

Stress Testing: A View from the Trenches

A GARP/SAS Institute Survey



Commercial Bank **41%**
Retail Bank **15%**
Asset Manager **10%**
All of the Above **21%**
Investment Bank **13%**

A majority of respondents come from commercial banks and diversified financial institutions

Responses came from nearly 60 countries; there were at least 10 from these countries

United States	83
Canada	31
India	29
United Kingdom	27
Switzerland	12
China & Hong Kong	20



Reporting Gap

Much less progress was perceived over the last 24 months in reporting versus other key stress testing functions

	Little	Some	Significant
Stress Test Modeling	24%	36%	29%
Data Management	19%	46%	25%
Scenario Management	26%	40%	21%

	Little	Some	No Progress
Reporting	55%	28%	12%

Technology Gap

When comparing technology and people resources, risk practitioners said technology comes up short

	Well Resourced	Adequately Resourced	Some Gaps	Major Gaps
Data Management				
People	13%	49%	29%	6%
Technology	8%	34%	40%	15%
Modeling				
People	12%	56%	28%	4%
Technology	11%	39%	36%	12%
Scenario Management				
People	9%	54%	28%	6%
Technology	8%	37%	37%	14%
Reporting & Analysis				
People	10%	55%	28%	5%
Technology	8%	37%	38%	13%

Self Assessment of Stress Test Processes

Risk professionals provided varied impressions of process maturity levels

	Mature/Highly Mature	Immature/Highly Immature
Data Quality	54%	44%
Data Governance	50%	47%
Data Integration	46%	52%
Model Development	57%	41%
Model Implementation	62%	35%
Model Governance	47%	48%

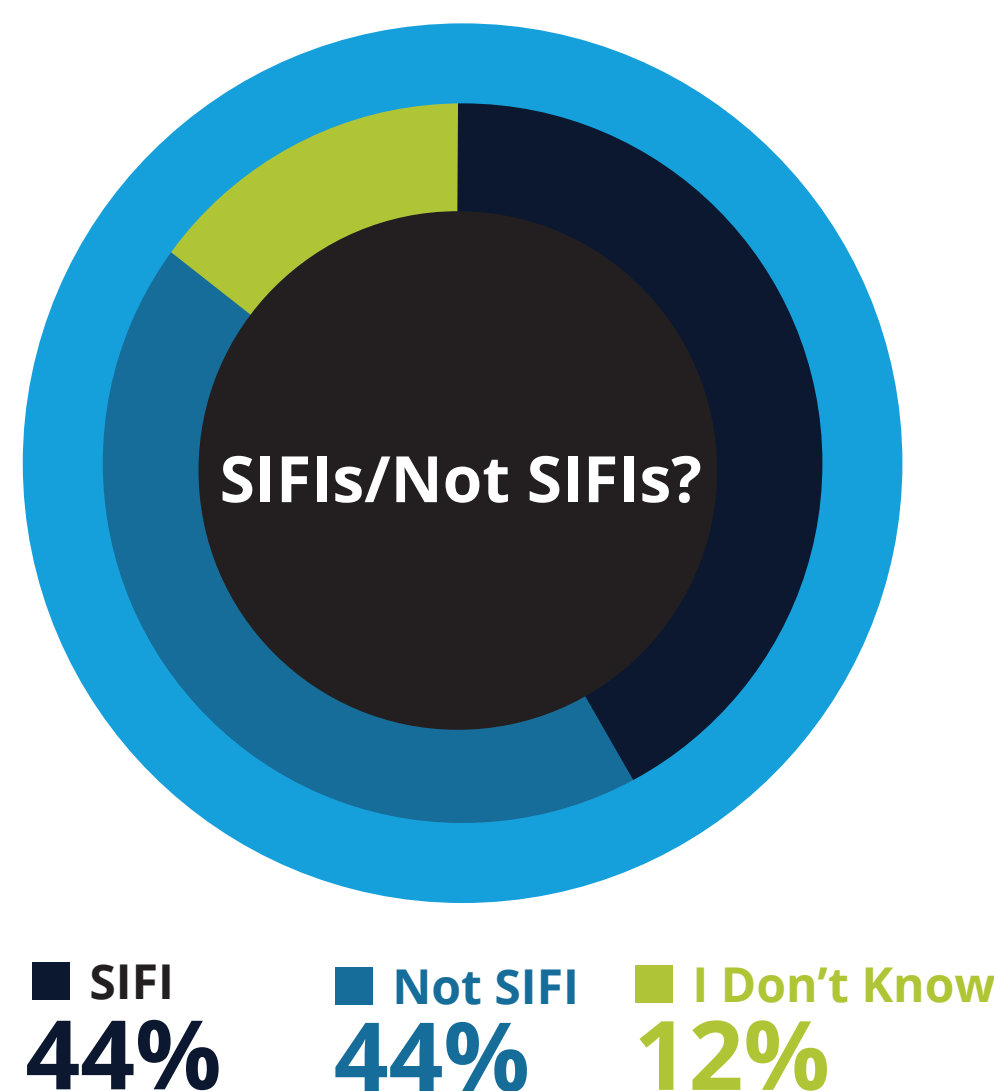
Defining the "Highly Mature"

	Overall	Highly Mature
Stress testing is said to get appropriate level of management attention	55%	93%
Have comprehensive, centralized library of scenarios	38%	79%
Have comprehensive, centralized library of risk factors	38%	76%
Have unified data repository that allows full integration, reconciliation	17%	73%
Internal risk models closely align with those of regulators	36%	69%
Account level is highest level of granularity supported by models	29%	47%

Functional Changes Based on Stress Test Results

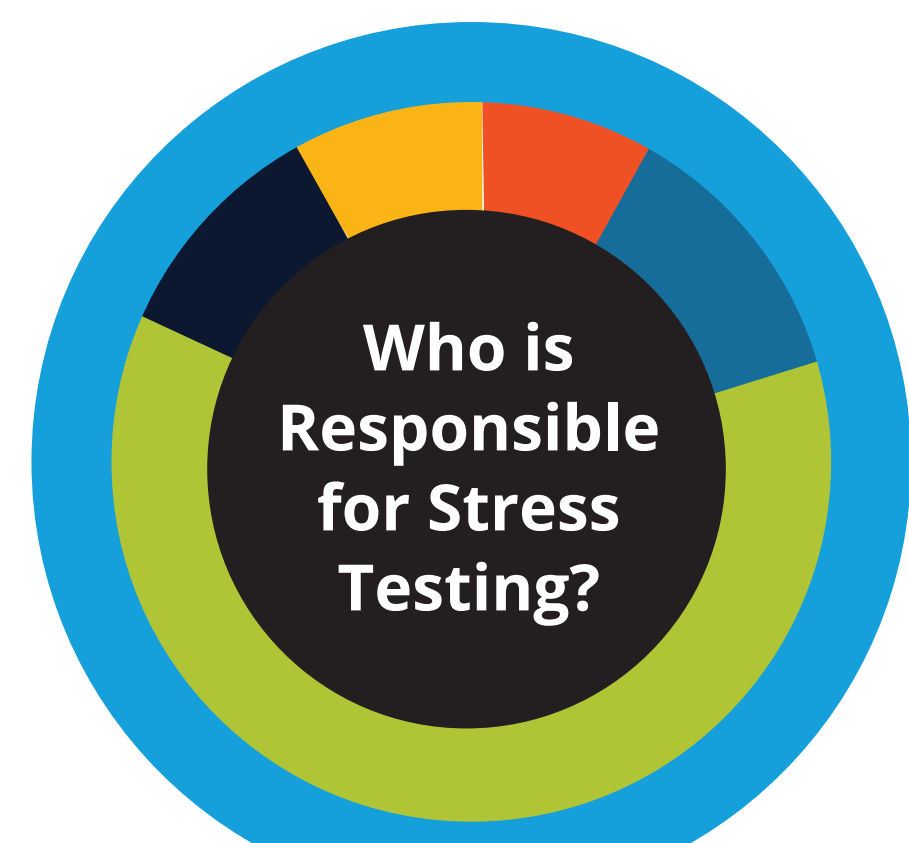
	Overall	Highly Mature
Risk appetite	19%	48%
Increased risk control resources	20%	48%
Liability strategy	11%	45%
Dividend strategy	8%	41%
Liquidity strategy	19%	48%
Asset strategy	16%	41%
Risk limits	21%	41%
IT systems improvements	19%	41%
Remuneration strategy	5%	35%
Operational strategy	13%	35%
Underwriting	8%	28%
Competitive strategy	10%	28%

There was an even split between systemically important financial institutions and non SIFIs



SIFI **44%**
Not SIFI **44%**
I Don't Know **12%**

More than six out of 10 said chief risk officers were responsible for stress testing



CRO **63%**
Business Unit Head **10%**
CFO **14%**
CEO **7%**
Other **7%**

About one fourth of respondents were from institutions with more than \$500 billion in assets



<10B **30%**
\$100B+ **8%**
\$10B-49.99B **23%**
\$250B-499.99B **6%**
\$50B-99.99B **9%**
\$500B+ **23%**

More than half said fewer than 10 staff were dedicated to stress testing



1-10 **55%**
11-25 **17%**
26-50 **8%**
51-100 **8%**
100+ **10%**
0 **3%**

Key Areas of Readiness to Close the Stress Testing Gaps

- MANAGING DATA** - Banks require comprehensive data management capabilities, including data quality, data lineage and metadata documentation, in a transparent and readily searchable form, through the entire stress testing cycle.
- MONITORING MODEL RISK AND PERFORMANCE** - Banks require capabilities to support model development as well as model governance enabling independent review and validation of models used in internal capital planning.
- IMPLEMENTATION** - Model execution platforms must aggregate results from large amounts of granular-level data to any desired level for analysis and reporting, while including process management capabilities that ensure all necessary steps are completed.
- COORDINATION** - Banks must specify scenarios and consolidate modeling results into balance sheets, financial statements and capital plans while orchestrating the various aspects of the stress testing process and consolidating the results from various systems.

Satisfaction with Regulatory Transparency

	Sufficient	Not Sufficient
Before the stress testing exercise		
All respondents	53%	33%
Highly immature	44%	32%
Highly mature	79%	7%
During the stress testing exercise		
All respondents	53%	27%
Highly immature	38%	30%
Highly mature	69%	0%
After the stress testing exercise		
All respondents	54%	29%
Highly immature	30%	38%
Highly mature	73%	10%