

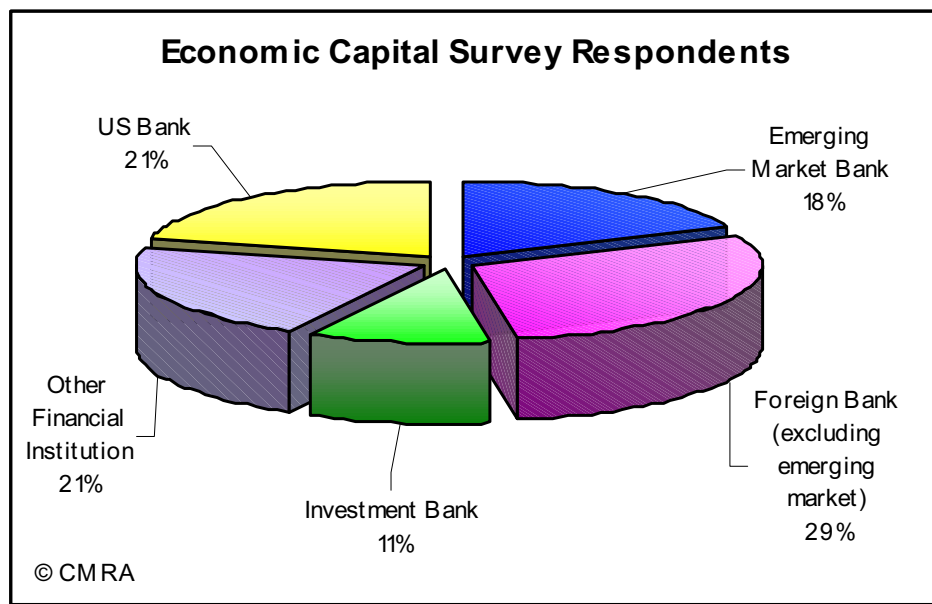


## Economic Capital Survey Overview

### Survey Participants

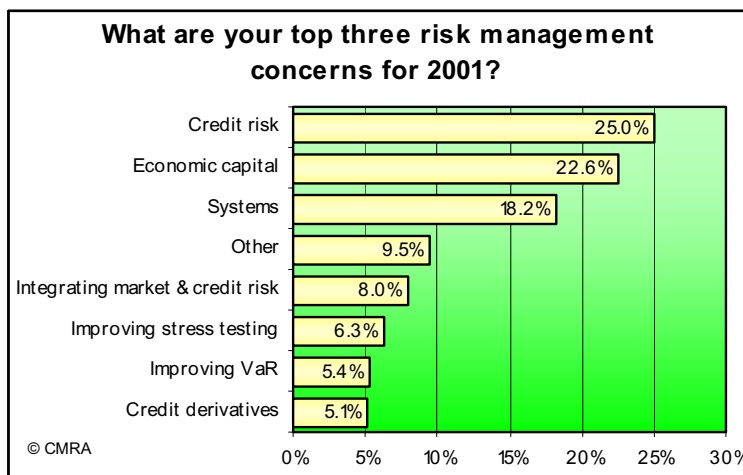
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- Participants include some of the largest global banks and investment banks in the world as well as representative domestic financial institutions from the US, UK, Italy, Japan, Canada, Norway, South Africa, Brazil, Mexico and Estonia.



## Top Risk Management Concerns for 2001

- When asked to select their top three risk management concerns for 2001, respondents chose credit risk, economic capital and systems, respectively.

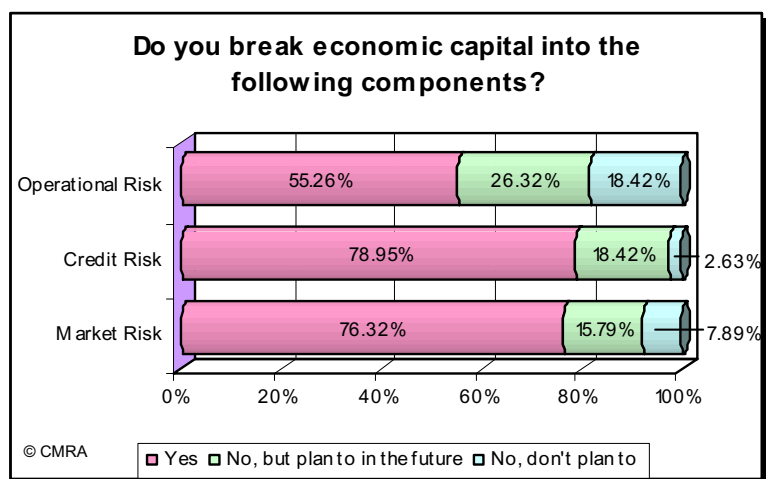


- Emerging market banks and investment banks consider credit risk and integrating market & credit risk to be higher concerns than do non-emerging market foreign banks, US banks and other financial institutions.

	<b>Credit Risk</b>	<b>Integrating Market &amp; Credit Risk</b>
Investment Banks	36.1%	11.1%
Emerging Market Banks	30.2%	14.3%
Foreign Banks (excluding emerging market)	24.7%	6.2%
Other Financial Institutions	20.6%	8.8%
U.S. Banks	19.4%	2.8%

## Components of Economic Capital

- 76.3% of respondents isolate market risk as a component of economic capital, 79% isolate credit risk, but only 55.3% isolate operational risk.



- Foreign banks (excluding emerging market banks) isolate market risk more frequently than U.S. banks while the opposite is true for credit and operational risk.

	Market Risk	Credit Risk	Operational Risk
US Banks	36.1%	36.1%	11.1%
Foreign Banks	19.4%	19.4%	2.8%

- Not surprisingly, investment banks isolate market, credit and operational risk components of economic capital less frequently than Basle regulated banks.

	Market Risk	Credit Risk	Operational Risk
Investment Banks	50.0%	50.0%	50.0%
Large Global Banks	100.0%	100.0%	87.5%
All Banks	84.6%	84.6%	61.5%

- Overall, the largest focus for the future is on operational risk, but even after the 26.3% of respondents who are planning to allocate economic capital for operational risk do so, more respondents plan to allocate capital for market and credit risk than for operational risk.
- All emerging market bank respondents plan to eventually allocate credit and market risk based economic capital while some banks and investment bank respondents are not as ambitious. Emerging market banks, however, are less ambitious with their operational risk goals – 28.9% don't plan to allocate economic capital for operational risk.
- 36.8% of respondents allocate economic capital to components other than market risk, credit risk and operational risk. These other components include: liquidity risk, business risk, strategic risk, lease residual risk, excessive rate risk, county risk and goodwill.

## Economic Capital Breakdown

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- Overall, respondents indicated that economic capital is allocated as follows:

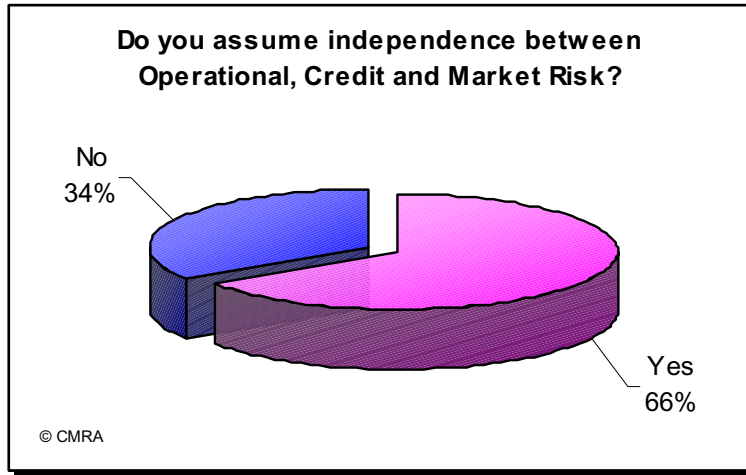
	Average	Maximum	Minimum
Credit Risk	62%	100%	25%
Market Risk	19%	70%	0%
Operational Risk	12%	30%	0%
Other	7%	50%	0%

- Large global banks have less of their economic capital covering credit risk than overall respondents and more of their economic capital covering operational and other risks.

	Average of Large Global Banks	Range of Large Global Banks	Overall Average
Credit Risk	49%	30-75%	61.7%
Market Risk	21%	10-25%	19.0%
Operational Risk & Other	31%	5-60%	19.3%

## Independence Between Market, Credit & Operational Risk

- Emerging market banks, more than other categories of respondents, assume independence between operational, credit and market risk.

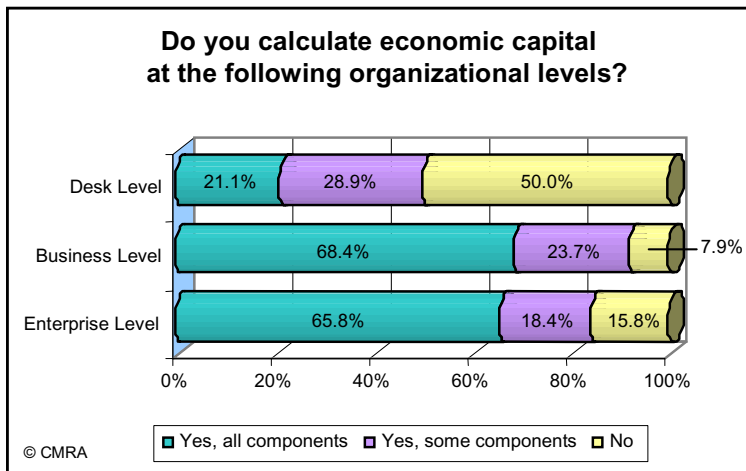


- Comments on independence include:

Emerging Market Bank	<i>"We assume they are additive"</i>
Foreign Bank	<i>"Aggregation via correlation markets"</i>
Other Financial Institution	<i>"Market correlated with credit, both uncorrelated with operational and business risk"</i>
US Banks	<i>"Correlations incorporated in models"</i>
	<i>" We explicitly specify correlations between risk categories and calculate an offset for inter-risk diversification"</i>

## Economic Capital Allocation Levels

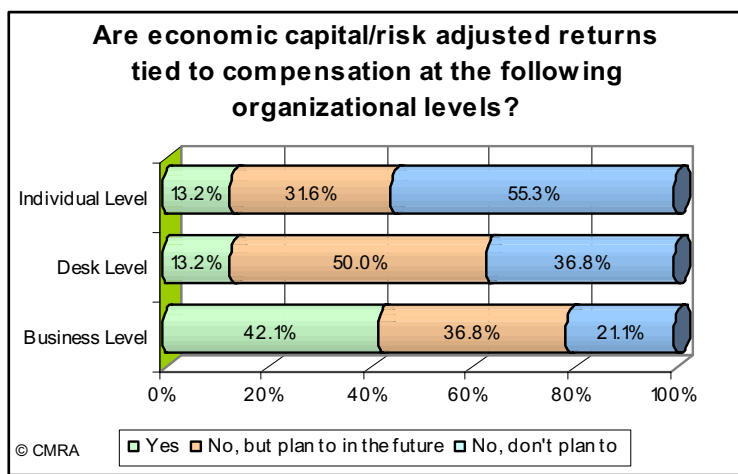
- Most respondents allocate economic capital at the enterprise and business levels, 84.2% and 92.1%, respectively. Only half the respondents allocate it at the desk level.



- Emerging market banks are the least likely to allocate economic capital at the enterprise, business or desk level.

## Tying Economic Capital/Risk Adjusted Returns to Compensation?

- 42.1% of respondents currently tie risk adjusted returns to compensation at the business level, while 13.2% do so at the desk and individual levels.



- Looking ahead, 36.8% of respondents are planning to tie risk adjusted returns to compensation at the business level, 50% at the desk level and 31.6% at the individual level.

# Market Risk

## Economic Capital

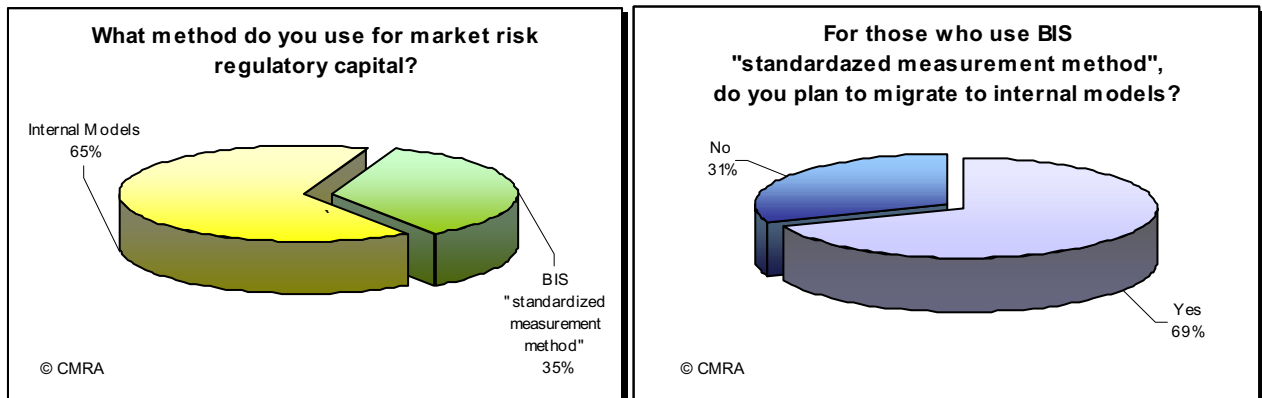
- The most frequently used methodologies for allocating economic capital for market risk are:

VaR	29.4%
Multiple of VaR	27.5%
Specific Scenarios	19.6%

- A small number of respondents (16.3%) use multiple methods to calculate economic capital for market risk.
- Emerging market banks are the least frequent users of methods such as “highest of all the above”, “highest of multiple scenarios”, and “highest of multiple stress tests”.

## Regulatory Capital

- Currently, 65% of respondents use internal models for market risk regulatory capital and 35% use BIS “standardized measurement method”. Of those using the BIS method, 69% plan to move to internal models.



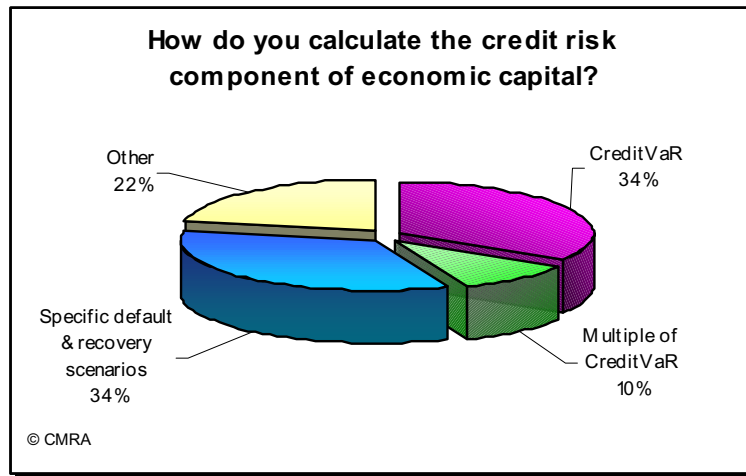
- None of the emerging market bank respondents currently use internal models but 71.4% plan to.
- Most major banks and investment banks are currently using internal models and all those who are not plan to.

## Credit Risk

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### Economic Capital

- 34.2% of respondents use specific default recovery scenarios, 34.1% use credit compliance of credit VaR and 9.8% use a multiple of credit VaR for establishing economic capital.

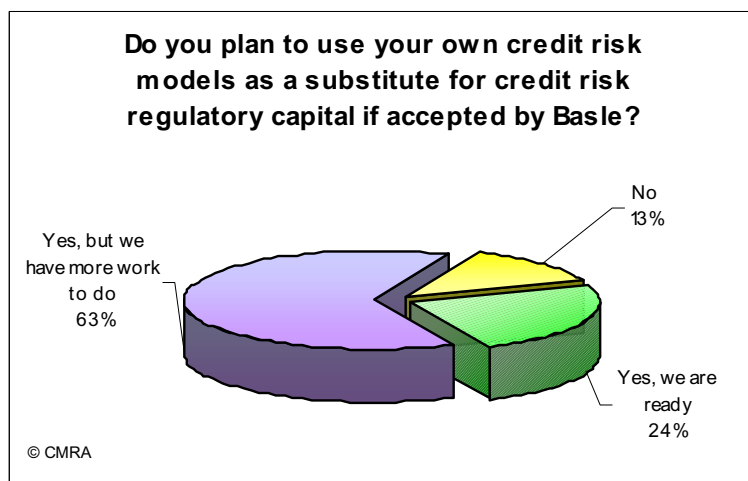


- Credit VaR and multiple of credit VaR are more popular with foreign and emerging market banks than other respondents.

## Regulatory Capital Plans

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- 23.7% of respondents plan to use their own credit risk models for regulatory capital if accepted by Basle and are ready now.
- 63.2% of respondents plan to use their own credit risk models as a substitute for credit risk capital if accepted by Basle, but have more work to do.

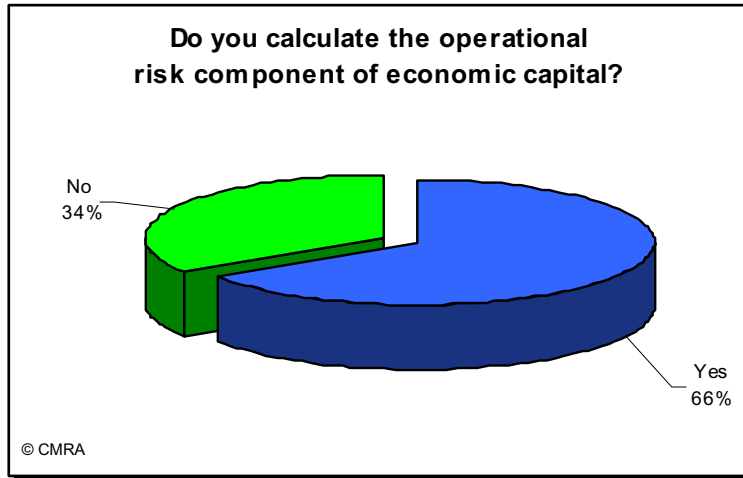




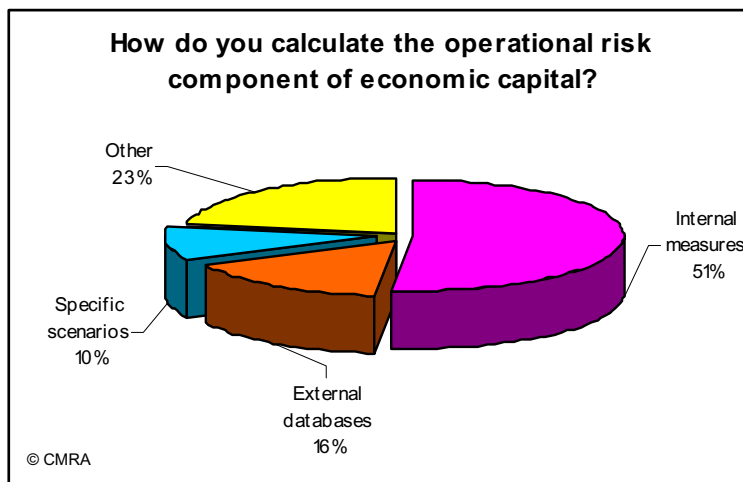
## Operational Risk

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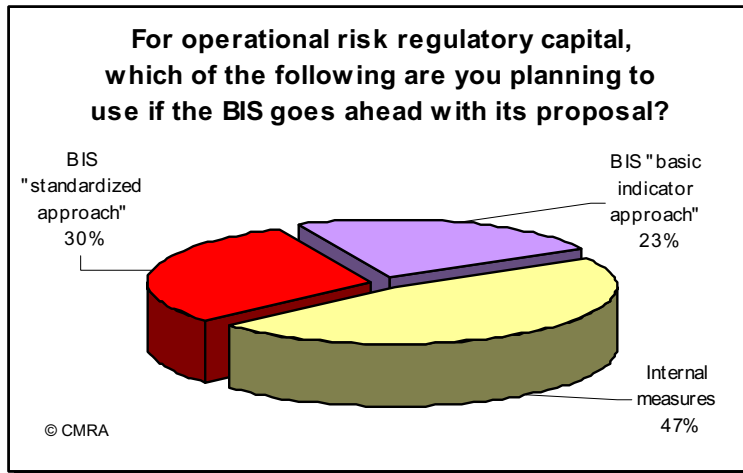
- 65.8% of respondents calculate operational risk as a category of economic capital.



- 16.1% of respondents use external databases, 51.6% use internal measures, and 9.7% use specific scenarios to calculate the operational risk component of economic capital.



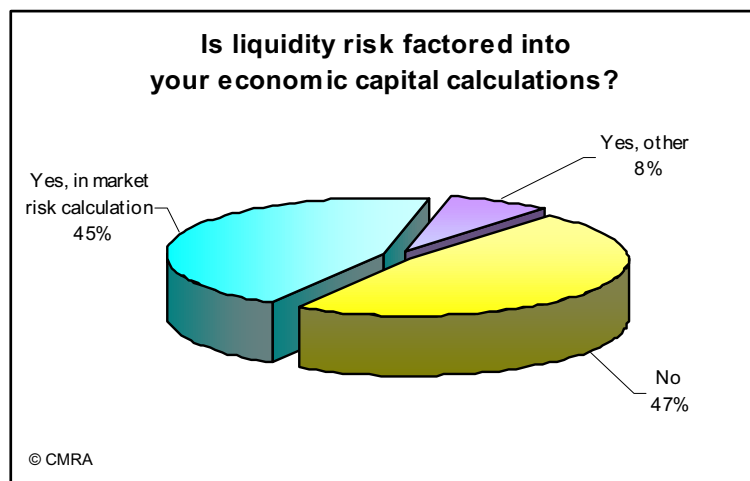
- If the BIS goes ahead with its proposal, 46.7% of respondents plan to use internal measures, 30% the BIS “standardized approach”, and 23.3% to use BIS “basic indicator approach”.



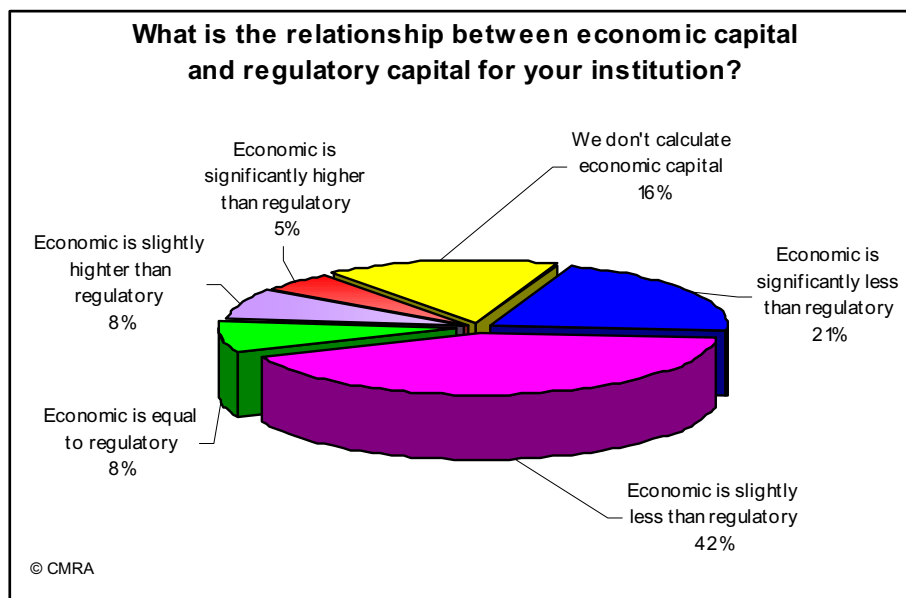
- Major U.S. and foreign banks are primarily planning on using internal measures, while investment banks, emerging market banks and “other” financial institutions are leaning towards using the BIS “standardized approach”

## Liquidity Risk

- 44.7% of respondents include a liquidity risk factor in their market risk economic capital and 8% include a liquidity factor elsewhere such as haircuts for extremely illiquid assets.



## RELATIONSHIP BETWEEN ECONOMIC CAPITAL AND REGULATORY CAPITAL



- Overall 13% of respondents indicated that economic capital is greater than regulatory capital but explained that economic capital doesn't take into account the diversification effect.
- 42.1% of respondents find economic capital to be slightly less than regulatory capital and 21.1% find economic capital to be significantly less than regulatory capital.
- Large U.S. and foreign banks more frequently find economic capital to be significantly less than regulatory capital than do emerging market banks, investment banks and other financial institutions.
- 68.4% respondents find economic capital is less than or significantly less than actual capital.