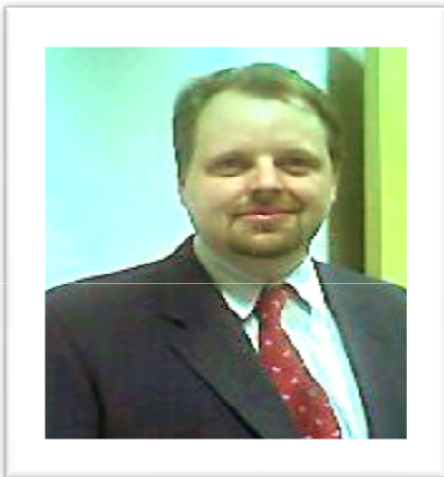


Presentation:

Thursday 13th August 2010

Essentials risk components of the ICAAP



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Mike is the Regional Solutions Manager for FRSGlobal's Risk and Regulatory solutions in Asia-Pacific. As Regional Solutions, Mike is responsible for business development and product sales support for FRSGlobal in the Asia Pacific Region. Mike is an advocate for sound risk management practices as strategic imperatives for banks in Asia-Pacific, and is based in Singapore.

Mike is the author of several whitepaper on Risk and has been a speaker at various industry workshops and seminars by such organisations as the Professional Risk Managers International Association (PRMIA). The Asian Banker Risk Certification Program and other organizations on such topics as: ALM Training Course, FTP Training Course, Liquidity Risk Management , "The value of ALM in Asia Pacific as part of a bank's Pillar II Basel compliance initiative", "Building an Effective ALM process", and "Five Best Practices for the Asia Pacific Bank of the Future".

Session Agenda

Introduction to ICAAP

- ICAAP and the Basel II accord
- ICAAP and the supervisory review Process

ICAAP Building Blocks – Assessing all Material Risks

- Credit Risk
- Market Risk in the Trading Book
- Interest Rate Risk in the Banking Book
- Liquidity Risk
- Operational Risk
- Other Risks

ICAAP Conclusions and Summary

Basel II Accord – Pillar I: Minimum Capital Requirement

Credit Risk

- Standardized Approach
- Foundation IRB Approach
- Advanced IRB Approach

Market Risk

- Standardized Approach
- Internal Models Approach

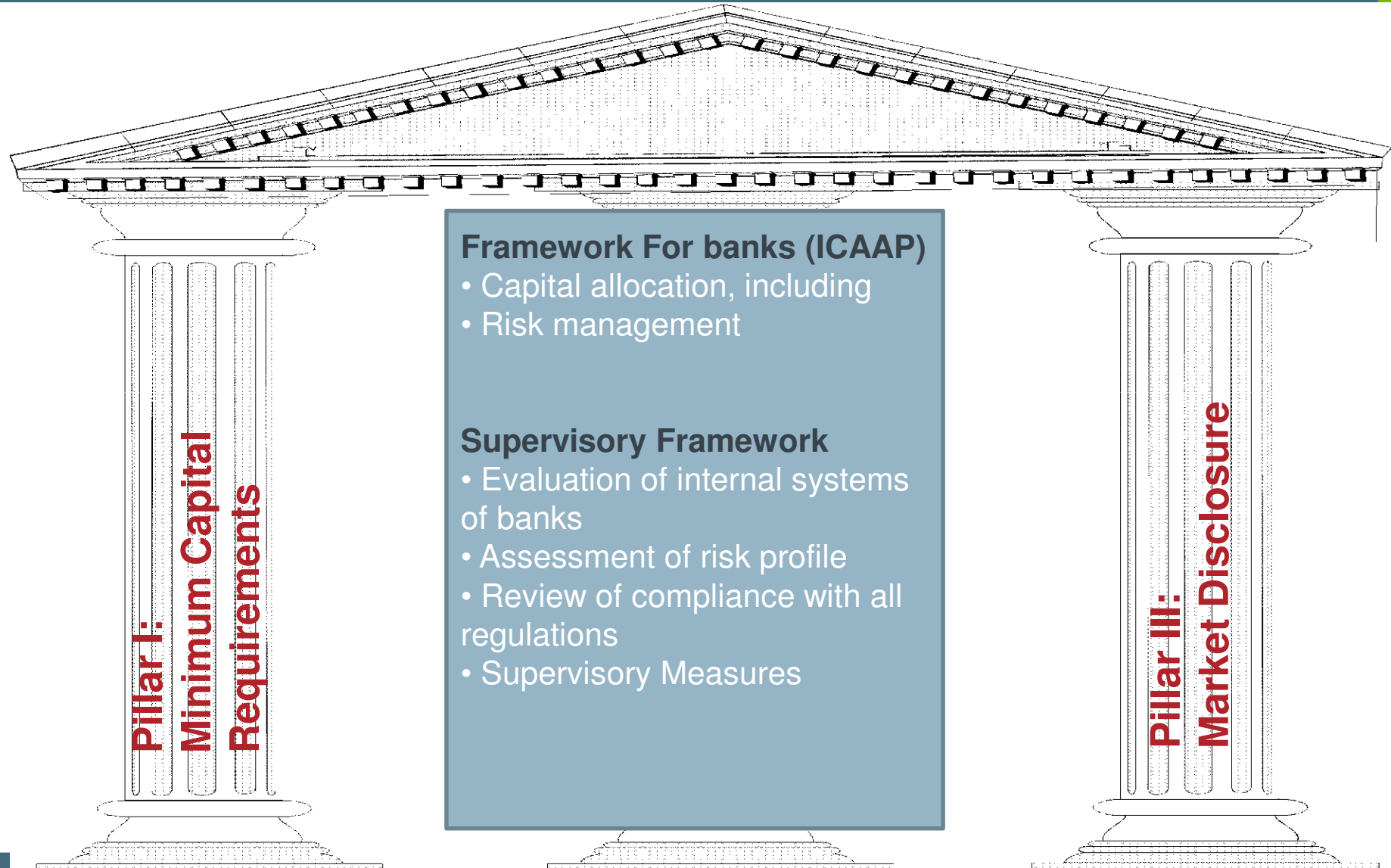
Operational Risk

- Basic Indicator Approach
- Alternative Std. Approach
- Adv Measurement Approach

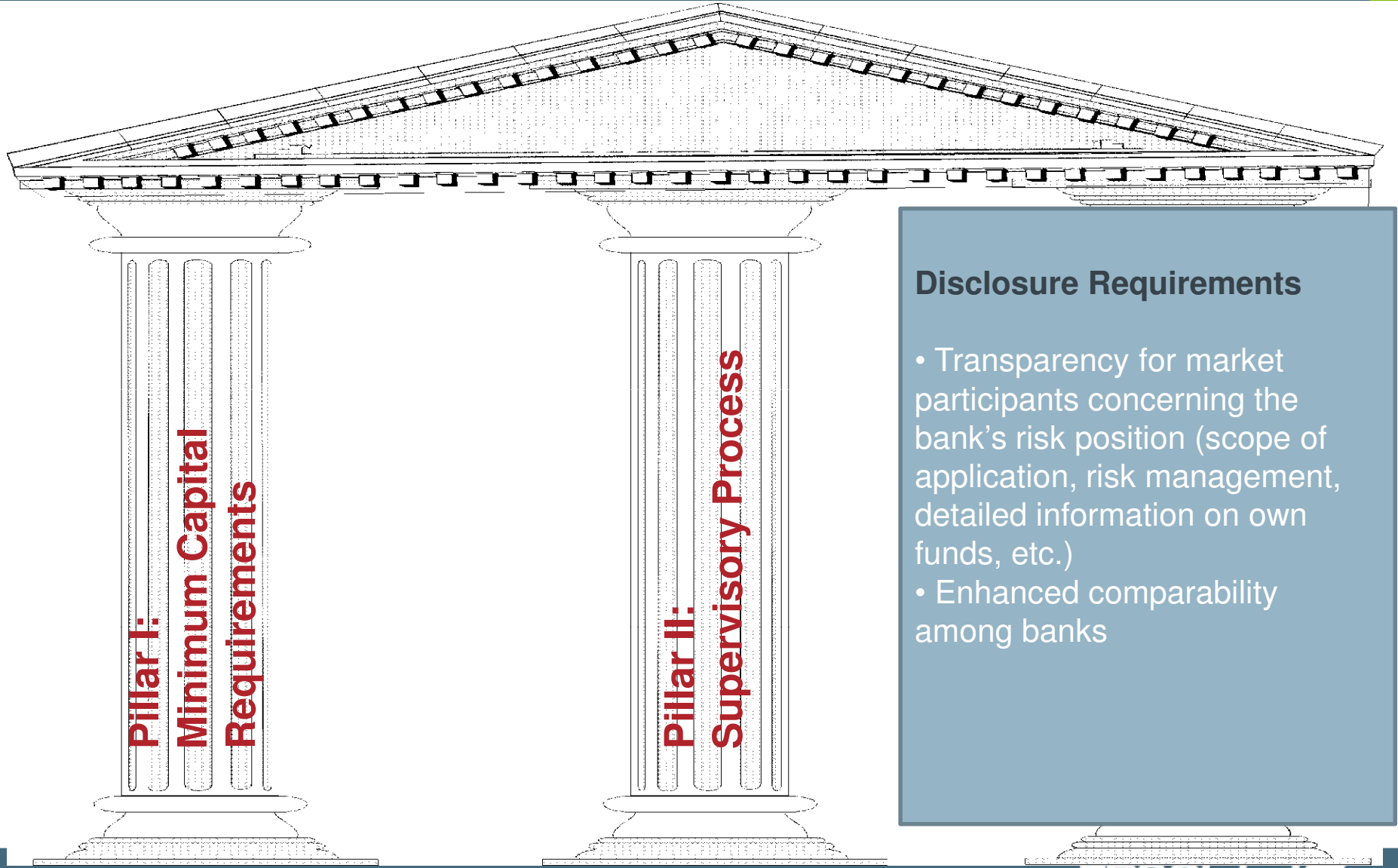
**Pillar II:
Supervisory Process**

**Pillar III:
Market Disclosure**

Basel II Accord – Pillar II: Supervisory Process



Basel II Accord – Pillar III: Market Discipline



ICAAP is linked most strongly with Pillar II

P1: Banks need a process for assessing their risk and overall capital adequacy.

ICAAP
BANK

P3: Banks are expected to operate above minimum requirements.

“Pillar 2 is an iterative “dialogue or ‘negotiation’ with the supervisor”; the more detailed knowledge a bank can demonstrate and prove about its risk, the more justification it has, and the stronger its position going into that negotiation”

P4: Supervisory intervention required (i.e. Prompt Corrective Action) if justified.

REGULATOR

SREP

P2: Supervisors should review banks’ assessments.

ICAAP and SREP

P1: Banks need a process for assessing their risk and overall capital adequacy.

ICAAP

P3: Banks are expected to operate above minimum requirements.

BANK

Identify & Assess Material Risks and Controls.

Identify capital in relation to risks, strategies & business plan.

Produce ICAAP assessment.

ICAAP Satisfactory?

Yes

Pillar 1 + Pillar 2 CAPITAL sufficient

No

Prudential MEASURES REQUIRED

Evaluate ICAAP versus minimum standards.

Assess, Review and evaluate ICAAP.

Review all risk and control factors.

REGULATOR

P4: Supervisory intervention required (i.e. Prompt Corrective Action) if justified.

SREP

P2: Supervisors should review banks' assessments.

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ICAAP Conclusions and Summary

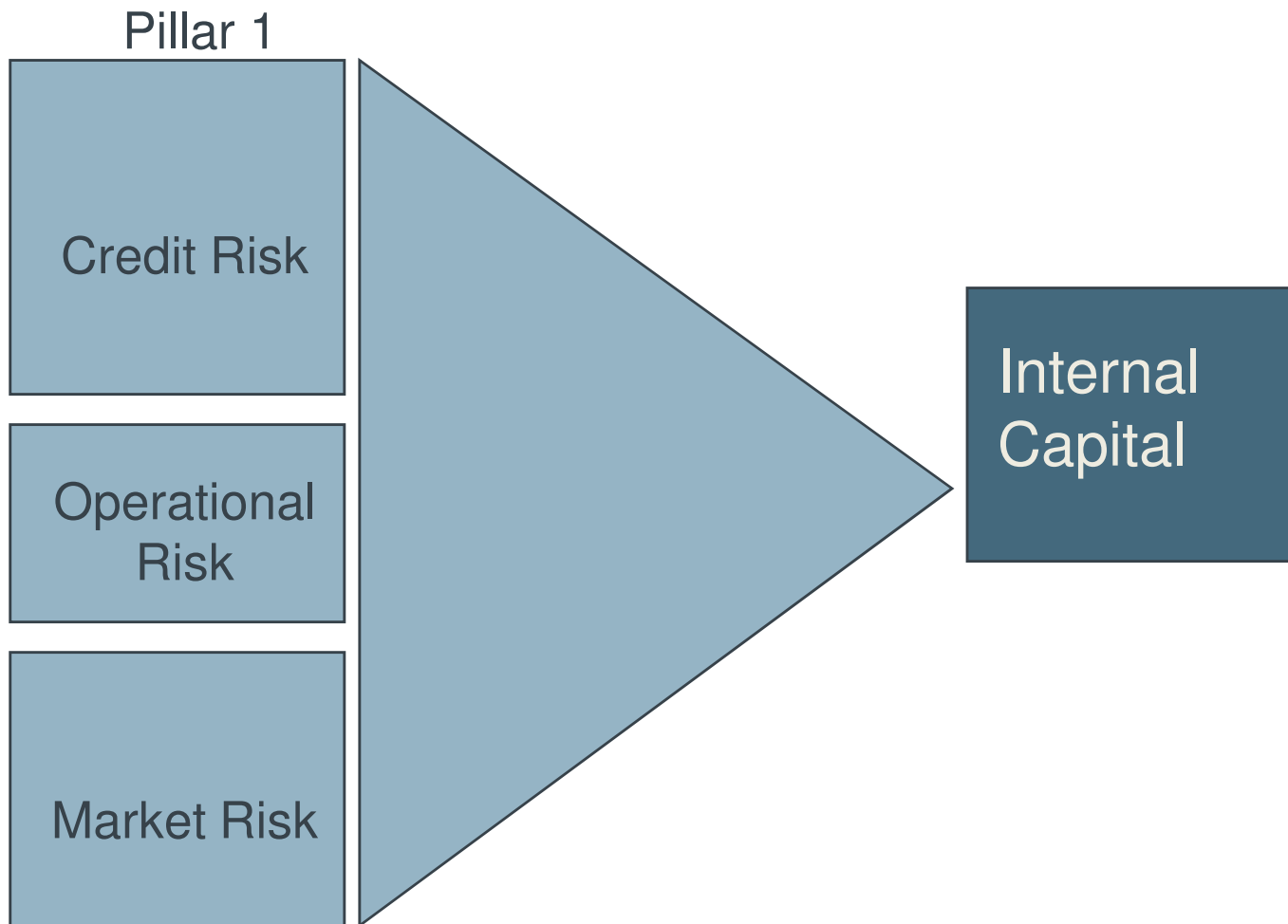
ICAAP defined

- Comprises all of a bank's procedures and measures designed to ensure:
 - Identification and measurement of all material risks
 - The appropriate level of internal capital in relation to the bank's risk profile, and
 - The application and further development of suitable risk management systems

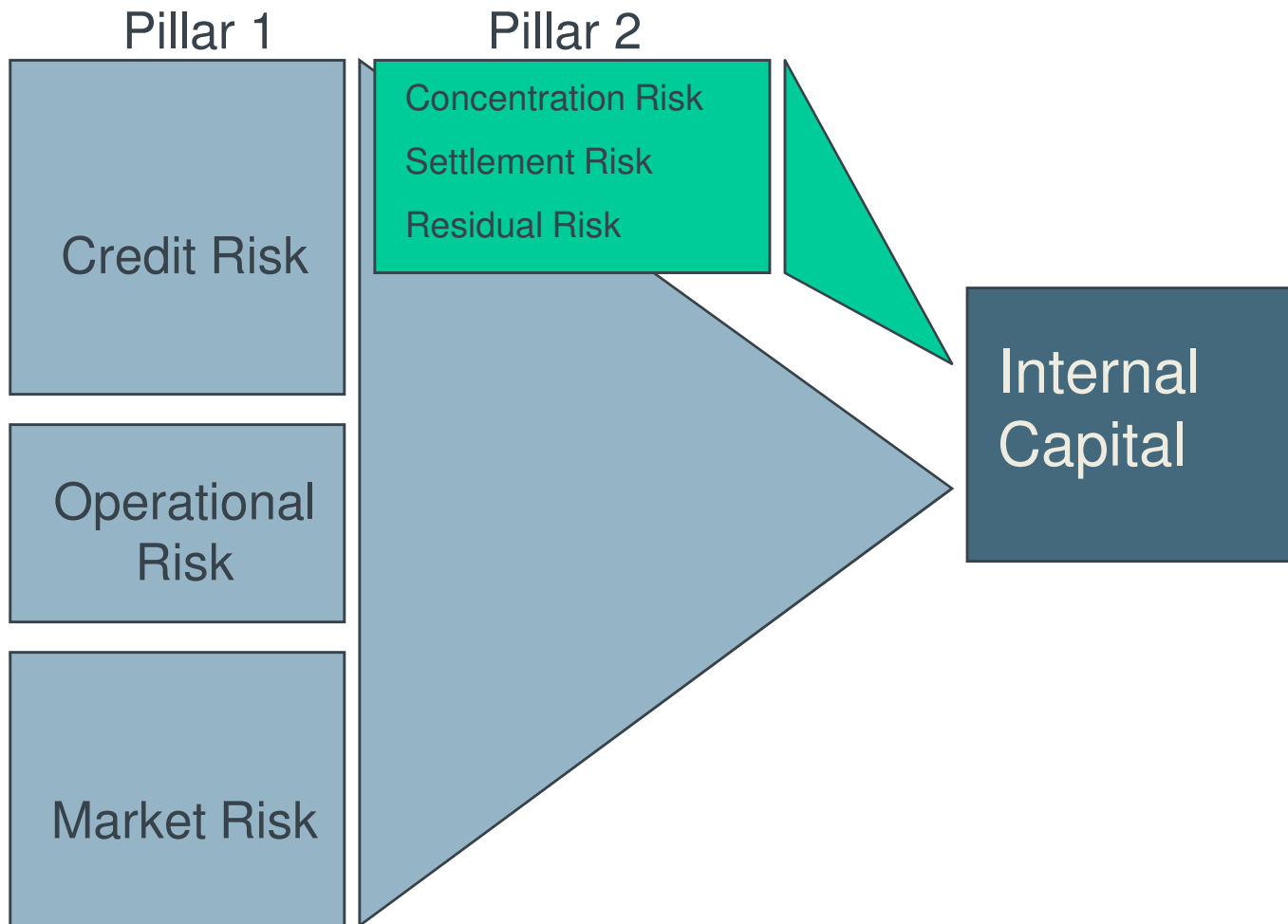
Assessing al Material risks

- Based on the ‘principle of proportionality’ – unique and specific to each bank.
- Initial indicator’s of a bank’s risk structure
 - Risk level of transactions
 - Complexity of transactions
 - Size of the bank
 - Scale of business activities
 - Significance of new markets and new transactions

Elements of ICAAP – Element 1



Elements of ICAAP – Element 2



ICAAP – Element 2 – Risks not fully covered under Pillar 1

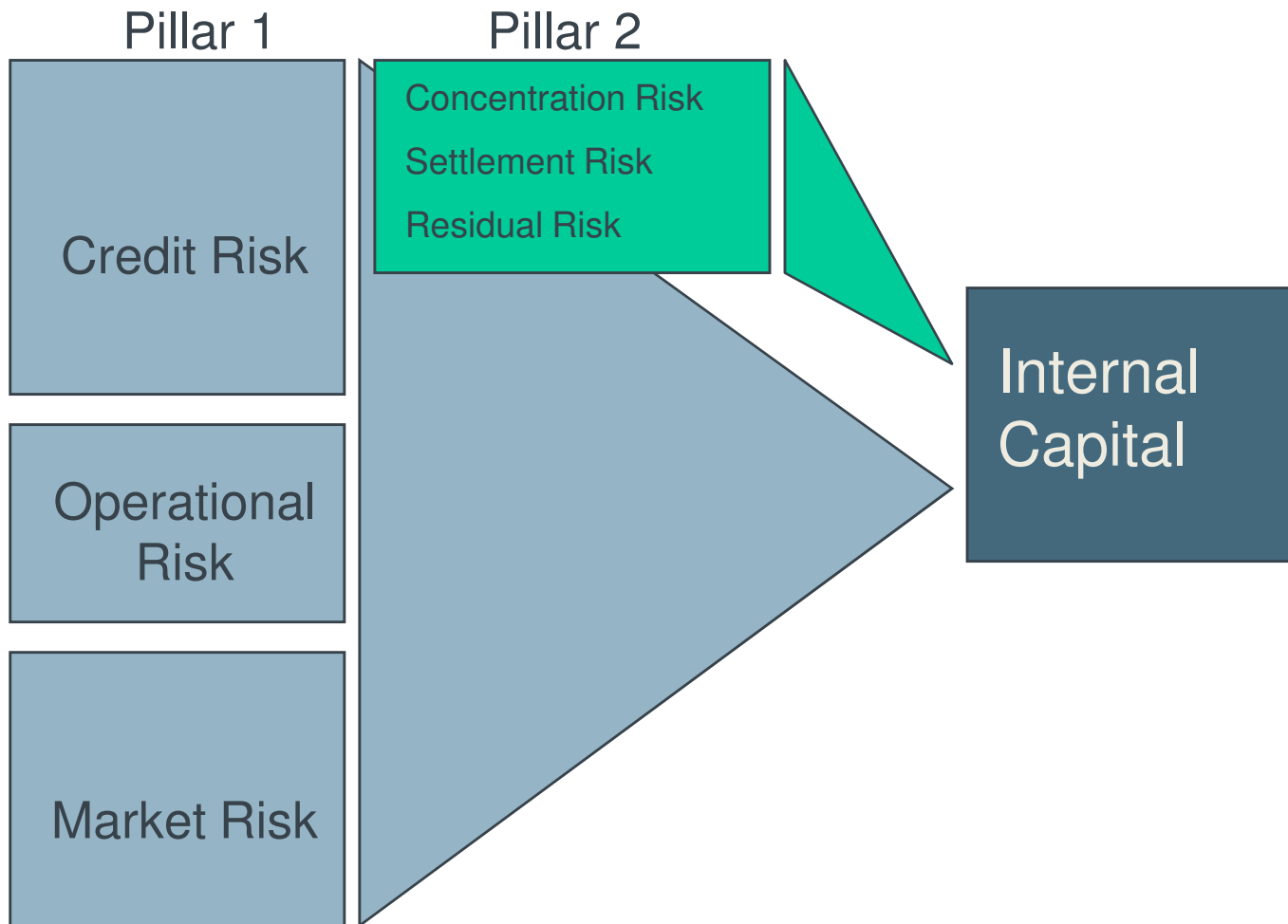
Credit Concentration Risk

- Large Exposures - Significant exposures to an individual counterparty or group of related counterparties. Banks might also establish an **aggregate limit** for the management and control of all of its large exposures as a group
- Credit exposures to counterparties in same economic sector or geography
- Credit exposures to counterparties whose financial performance is dependent on the same activity or commodity
- Indirect credit exposures arising from a bank's CRM activities (e.g. exposure to a single collateral type or to credit protection provided by a single counterparty)

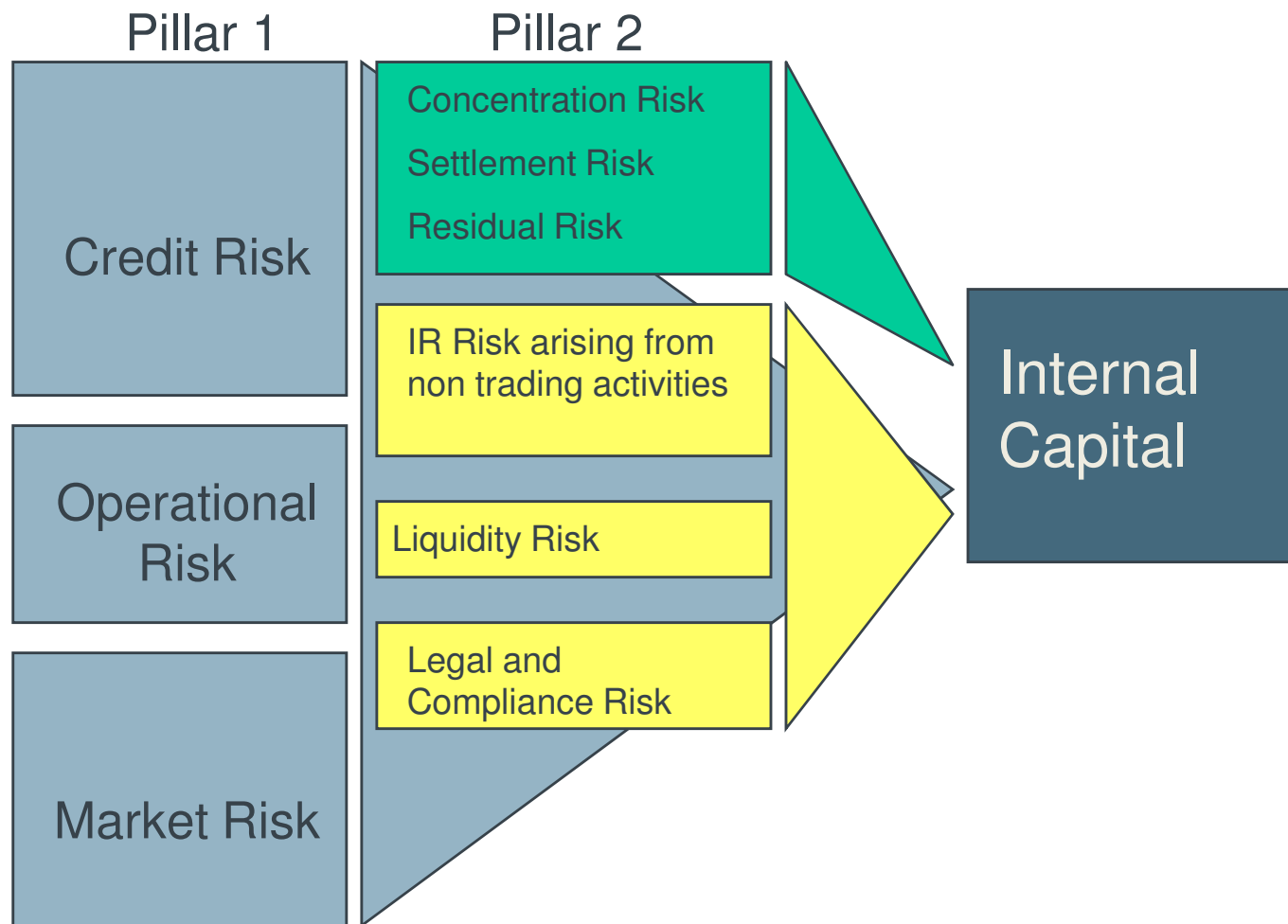
Residual Risk

- Inability to seize, or realise in a **timely** manner, collateral pledged (on default of the counterparty)
- **Refusal** or delay by a guarantor to pay
- Ineffectiveness of untested documentation

Elements of ICAAP



Elements of ICAAP- Element 3



ICAAP – Element 3 – Risks not covered under Pillar 1

Interest Rate Risk in the Banking Book

- Must consider all bank's IR positions incl. relevant re-pricing and maturity data.
 - Current balance, contractual IR, IR ceilings and floors, Principal etc
- Banks must perform a 200 bp rates up/down stress test and other yield curve shifts (parallel, non-parallel, rate-ramps, etc)
- If stress-test => economic value falls by 20%, then Supervisory intervention

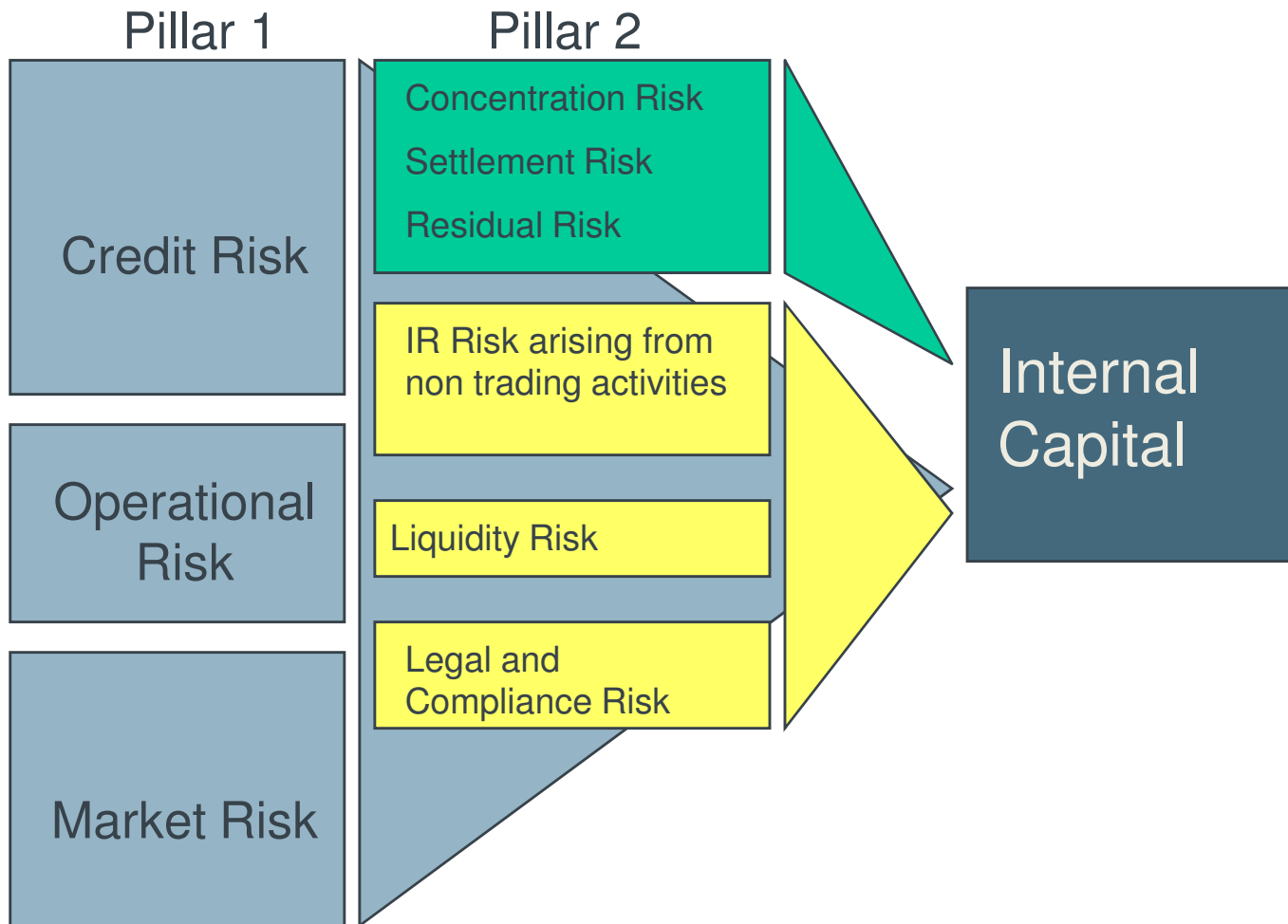
Liquidity Risk

- Uncertain liquidity, compounding other risks; market, credit,
- Sudden unexpected cash-flows, CP avoid trading/lending

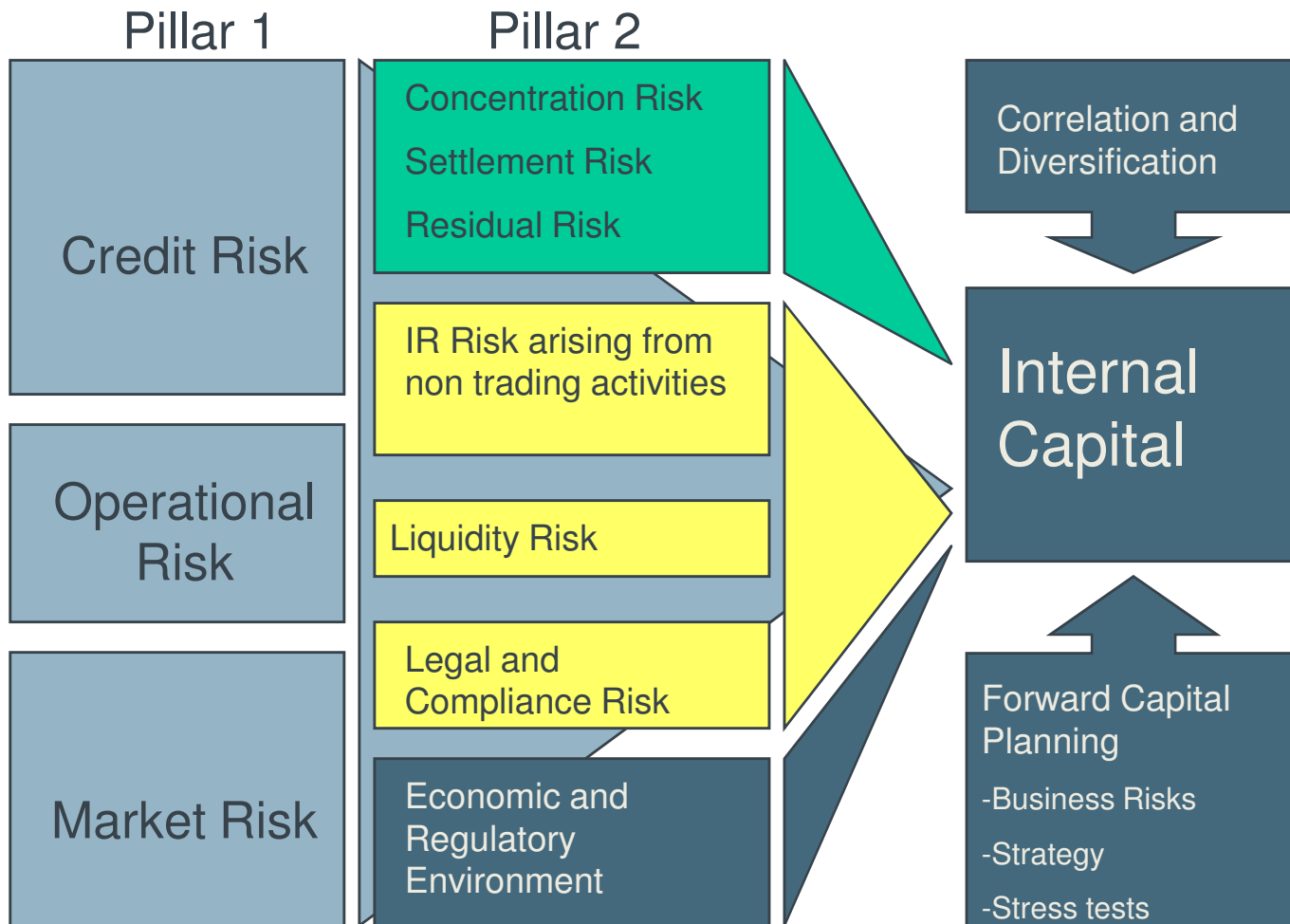
Legal/Reputation Risk, etc.

- No specifics on methodologies provided
- Qualitative Risk Indicators can be used
- Unenforceable contracts, lawsuits impacting banking operations
- Fed (Mar 2006) Risk Committee identified AML compliance crucial

Elements of ICAAP



Elements of ICAAP – Element 4



ICAAP – Element 4

Strategy / Economic & Regulatory Environment

- No specific prescribed approaches
- The six Ps of marketing - product, price, place, promotion, process and people are going to be designed with economic capital in mind
- Use of Qualitative Risk Indicators
- Vision, Mission may be formed from Bottom up and not Top down

Capital Planning (ICAAP must be ‘forward-looking’)

- The what-if analysis required to support various scenarios for Risk and Capital over multiple time horizons
- Current Credit Exposure vs. Future potential Exposure

Risk Aggregation – Inter-Risk Correlation – Economic Capital

- Either a ‘structured’ approach, using different methodologies for the different risk types (Pillar 1 and Pillar 2 risks) and then calculating a simple sum of the resulting capital requirements or applying ex-post correlation factors or
- A more sophisticated and complex system, possibly using ‘bottom-up’ transaction-based approaches with integrated correlations

Variety of Stress tests required

1. Credit risk 415 adverse economic conditions and unexpected events
2. Credit risk 415 range or economic conditions likely to occur over a business cycle
3. Credit risk 434 economic or industry downturns
4. Credit risk 434 market-risk events
5. Credit risk 434 liquidity conditions
6. Credit risk 435 mild recession scenarios, (for example, two consecutive quarters of zero growth)
7. Credit risk 436 changes in the bank's rating
8. Credit risk in equities 527(j) hypothetical or historical scenarios that reflect worst case losses
9. Operations Risk 665 bank specific business environment
10. Operations Risk 665 scenario analysis defined in 675 to be statistical loss analysis
11. Interest Rate Risk 826 (6) upward and downward rate shocks

“Basel II Comprehensive Approach”

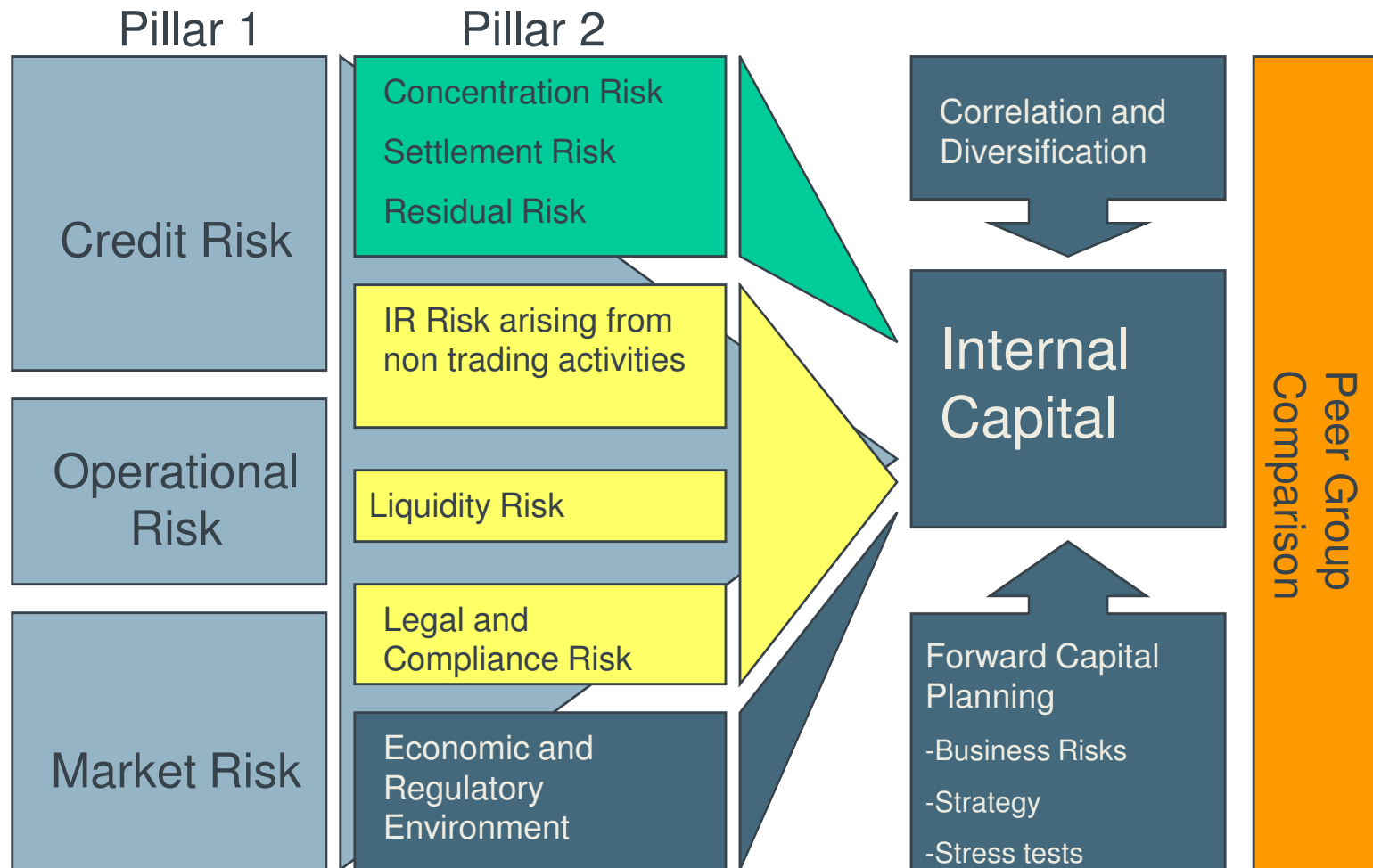
1. Principal 1: ability to withstand stressful events in the market place as part of day-to-day management.
2. Principal 6: internal (bank-specific) what if scenarios {also required by Basel II for operations risk}.
3. Principal 6: external (market related) what if scenarios {also required by Basel II for credit risk}.

“Principles for Sound Liquidity Risk Management and Supervision”
September 2008

1. Abrupt changes in the general level of rates (duplicated in Basel II).
2. Changes in relationships between market rates.
3. Changes in the liquidity of key financial markets.
4. Changes in the slope and shape of the yield curve.
5. Changes in the volatility of key market rates.
6. Key business assumptions and parameters breakdown / worst case.

“Principles for the Management and Supervision of Interest Rate Risk,” July 2004

Elements of ICAAP - SREP

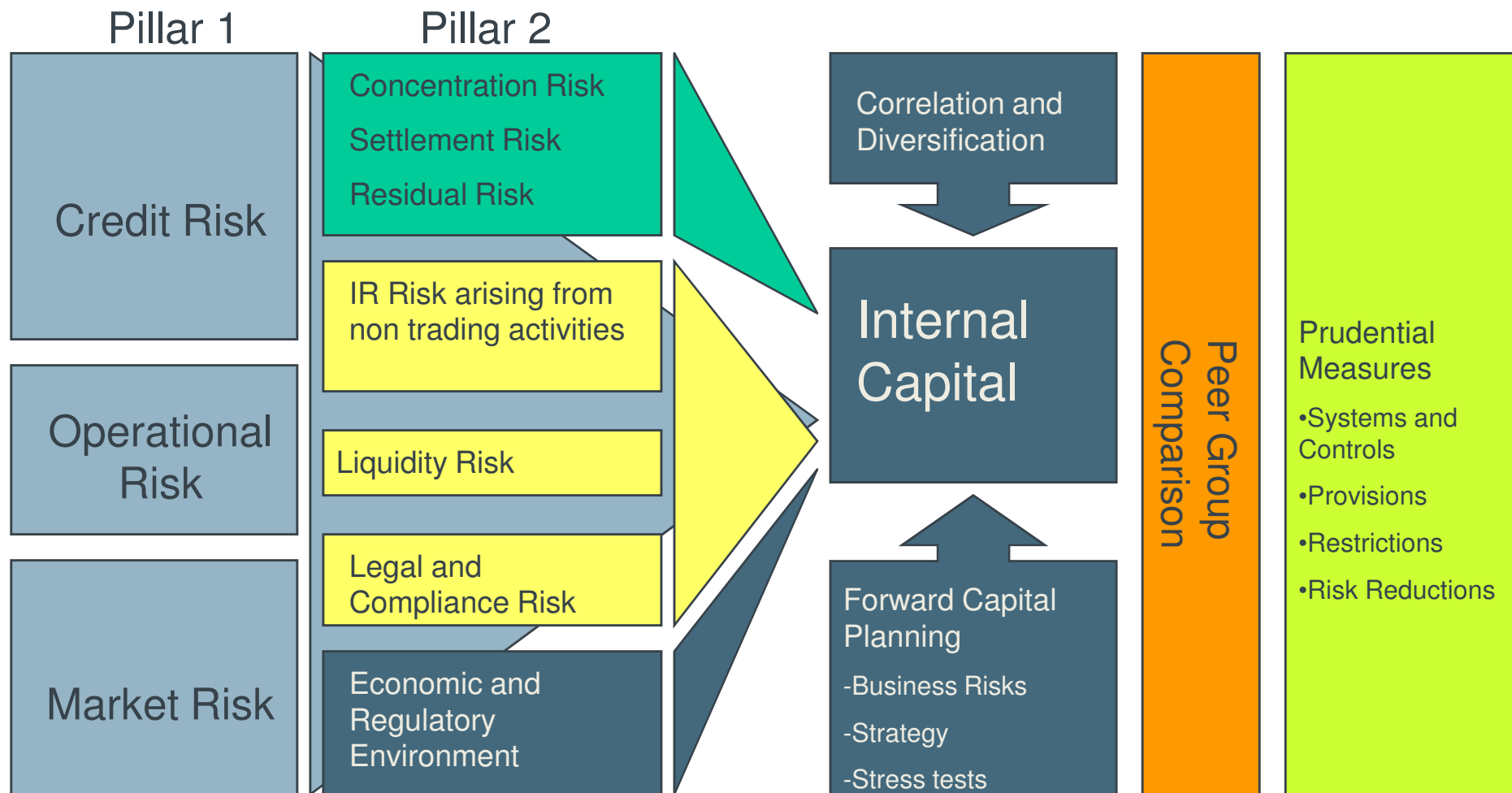


Regulatory Expectations of ICAAP

- ☰ Clearly described & evidenced ICAAP process
- ☰ Comprehensive coverage of material risks
- ☰ Quality of management & track record of delivery
- ☰ Business as usual capital
 - Conservatism in Pillar 1 and Pillar 2
 - Perspective of how it will behave through a cycle
- ☰ ‘Simple and intuitive presentation’
 - Clear top-down view
 - Clear statement of assumptions
 - Differences between Basel II & risk capital for Pillar 1 risks

Source: FSA presentations

Regulatory Expectations of ICAAP

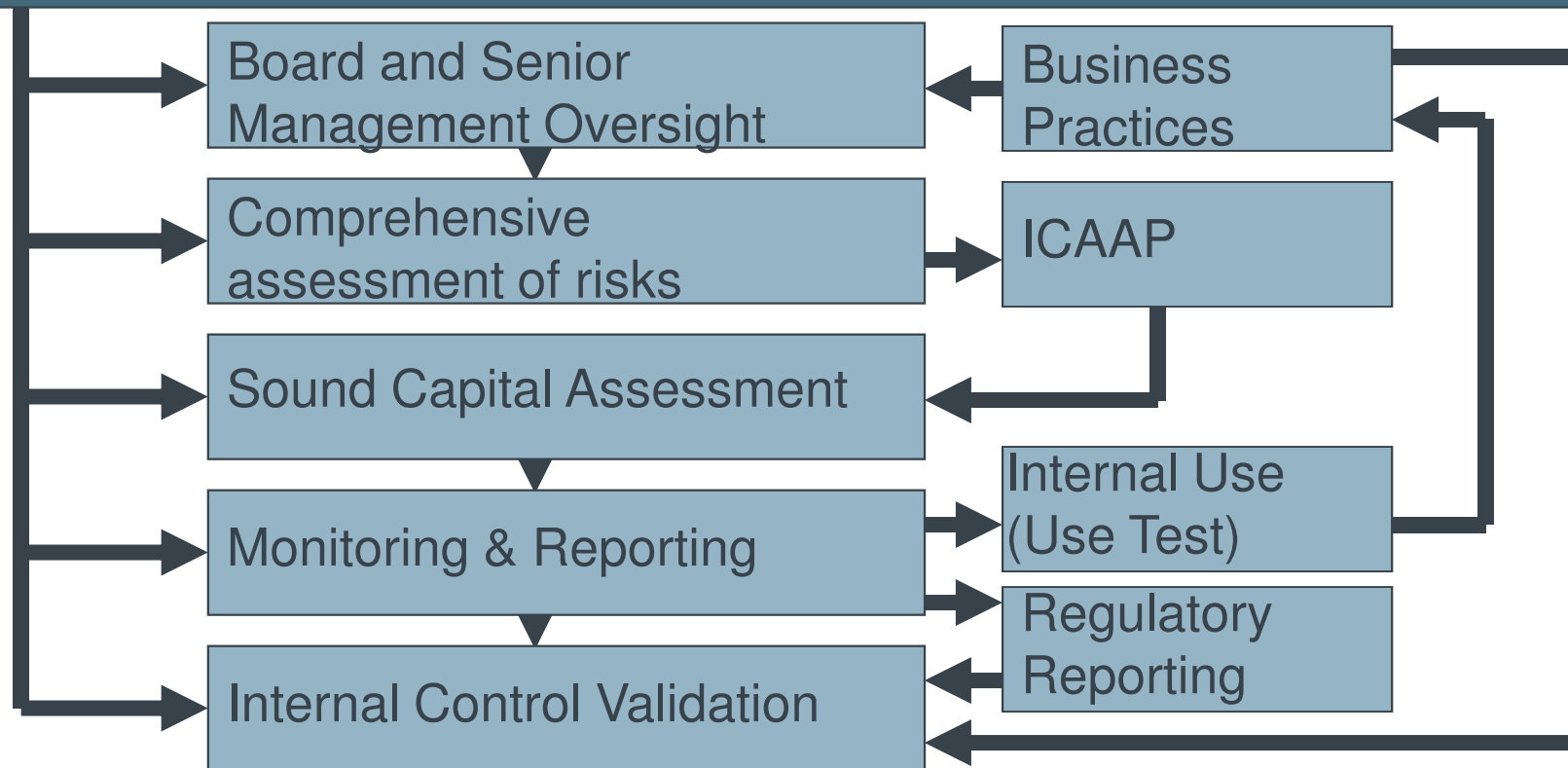


Broader Pillar 2 Compliance Process

P1: Banks need a process for assessing their risk and overall capital adequacy



P3: Banks are expected to operate above minimum requirements

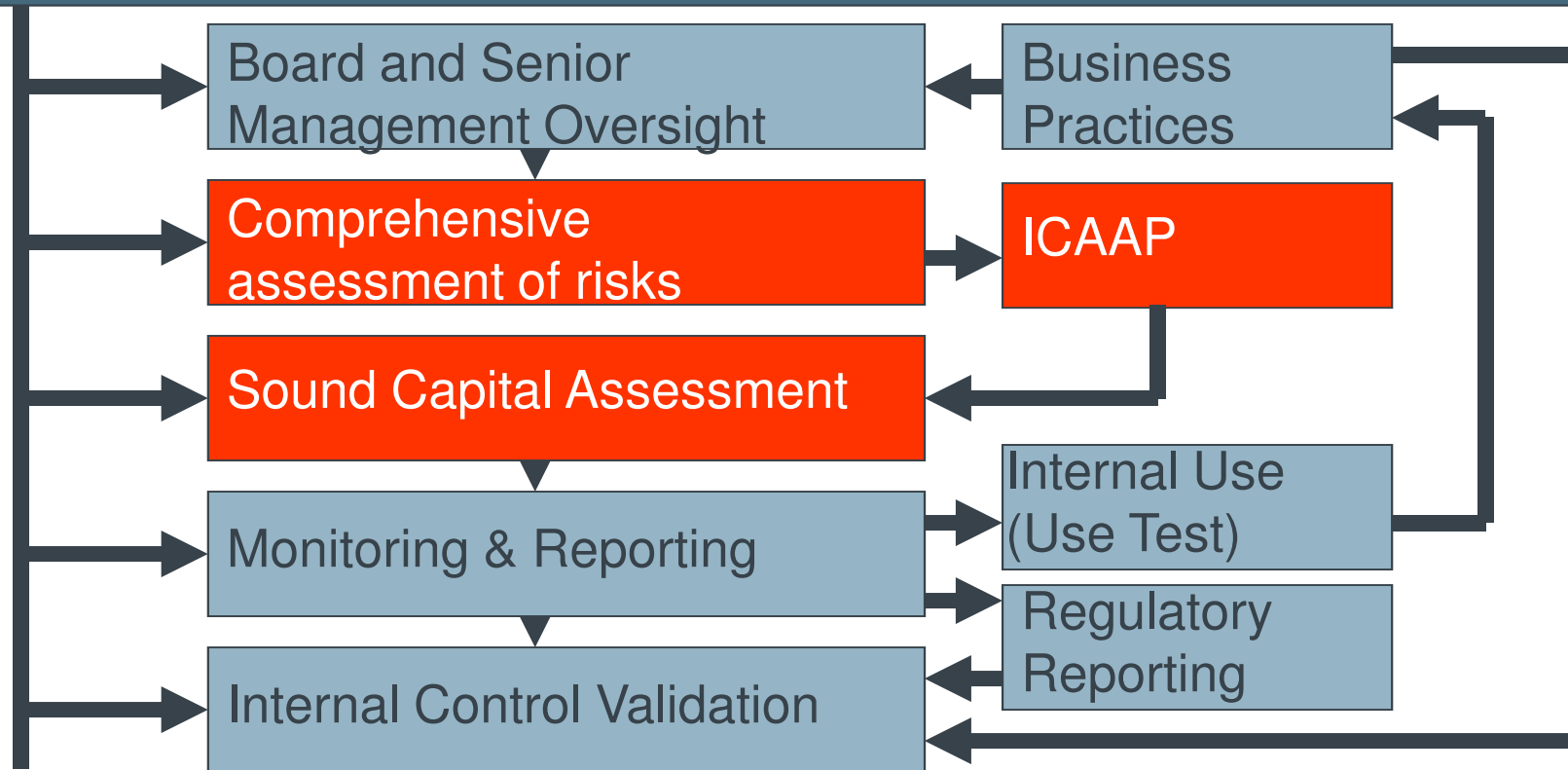


Elements of Pillar 2 Compliance Process - ICAAP

P1: Banks need a process for assessing their risk and overall capital adequacy



P3: Banks are expected to operate above minimum requirements

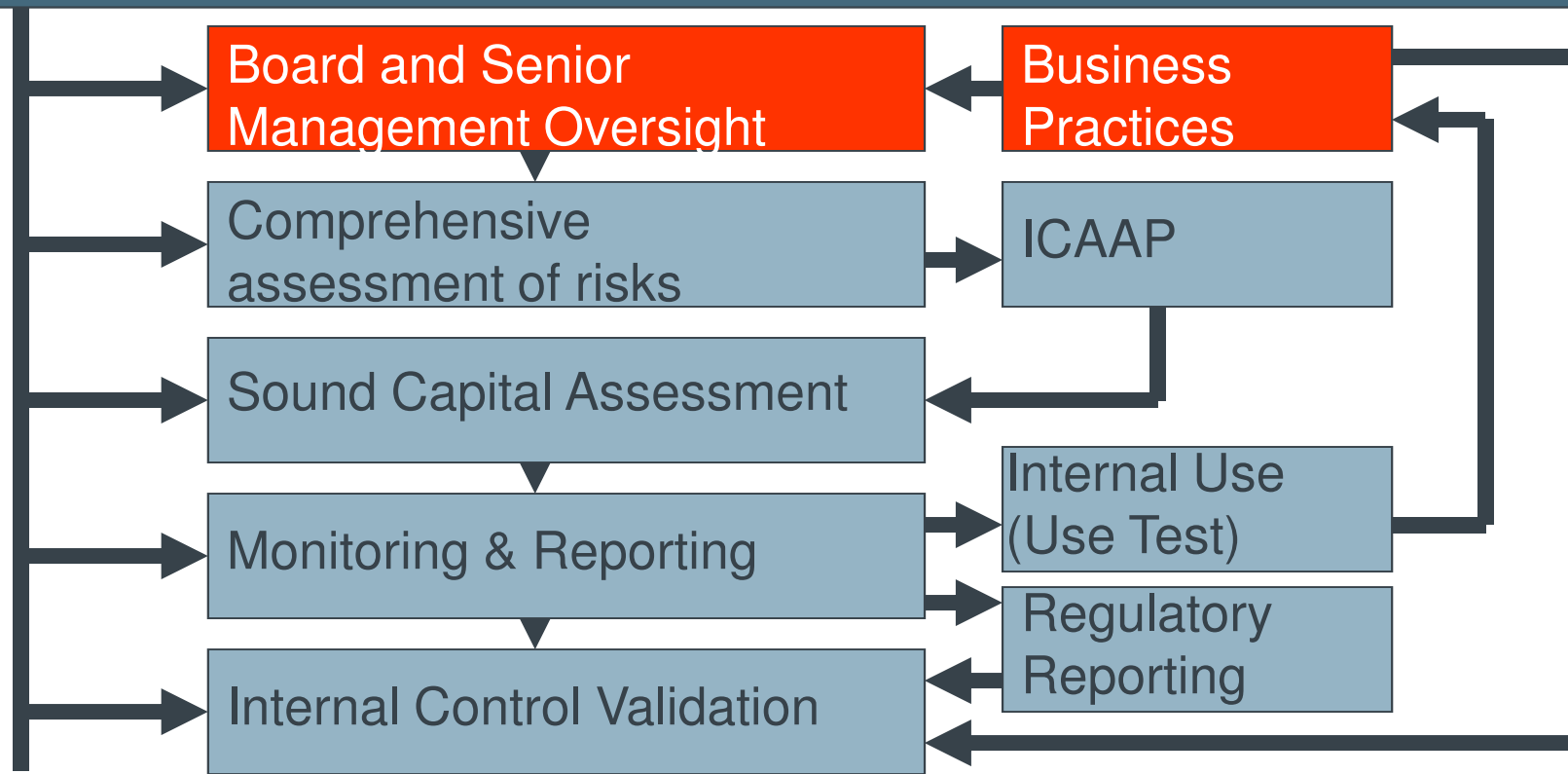


Elements of Pillar 2 Compliance Process - Oversight

P1: Banks need a process for assessing their risk and overall capital adequacy



P3: Banks are expected to operate above minimum requirements



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ICAAP Conclusions and Summary

Other ICAAP Considerations

- Not much time spent today on how to make ICAAP forward looking, but you are in luck.

Stress testing and capital planning - the key to making the ICAAP forward looking (PRMIA Greece Chapter Meeting Athens), 25 October 2007 courtesy of PWC.

- Another related and interesting topic:

- Reverse Stress Testing
- How to incorporate this into ICAAP

- Two areas worth a brief but specific mention:

- Defining Specific Assessment Procedures for Materials Risk
- Aggregation of Risks

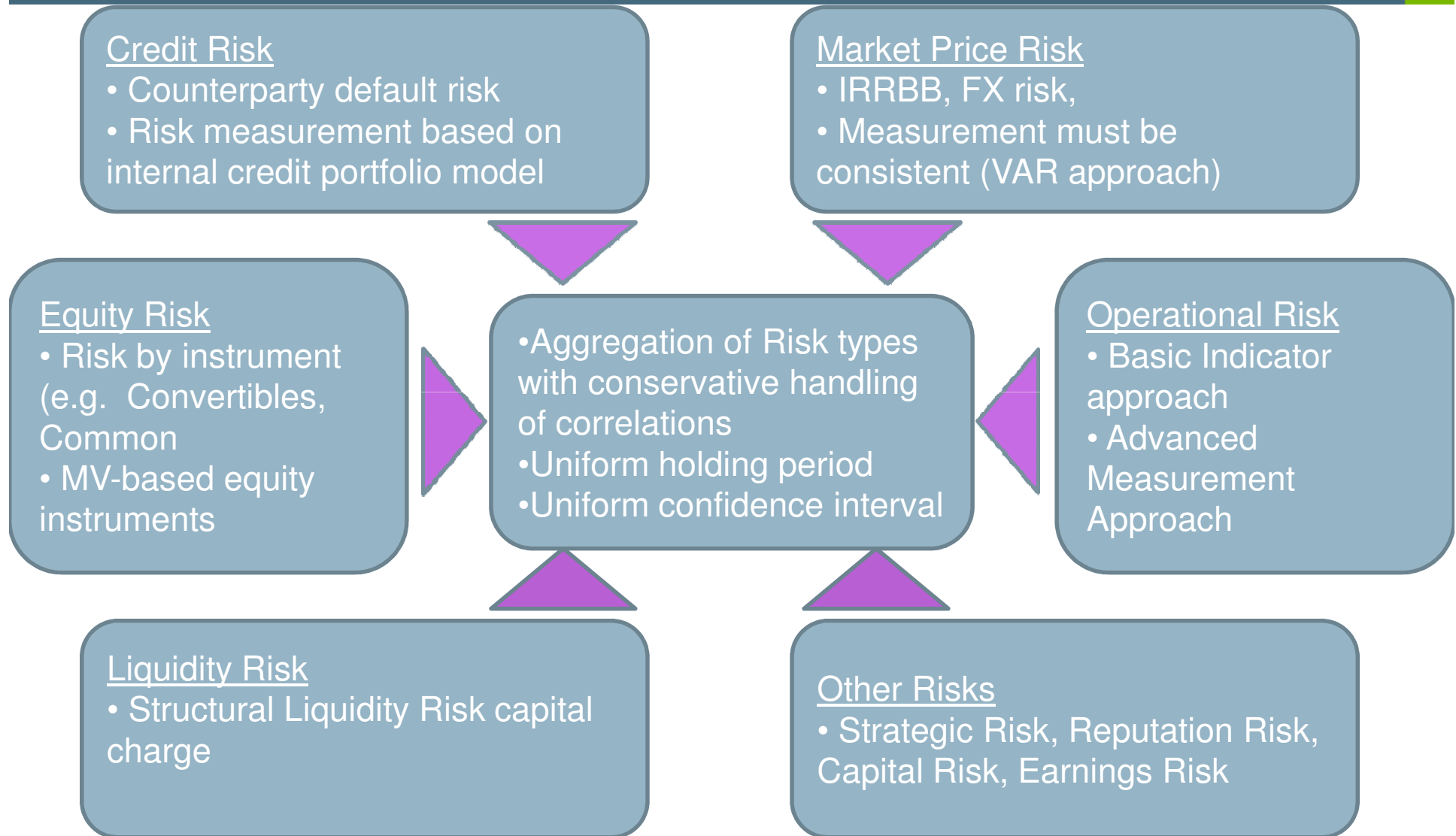
ICAAP: Specific Assessment Procedures

- Evaluate which risks are part of the ICAAP (material to risk-bearing capacity analysis) and which are not.
- Determine and document the assessment approach for each material risk
 - Standardized approaches
 - Internal approaches
 - Capital cushion approach
- See the accompanying chart.

Aggregation of Risks

- For banks with regulatory approaches to calculating minimal capital requirements, the additive approach (CR+MR+OR) is the only alternative. Other risks are accounted for with additional capital cushions or additional calculations (e.g. IRBB) if possible.
- VAR is a natural approach for aggregating risk although caution must be taken
 - 99.9% confidence interval on a 1-year holding period (same at IRB approach to Credit Risk)
 - Does not easily incorporate Operational Risk however, and additional capital cushions are required.

ICAAP: Risk Aggregation



ICAAP Summary of the Essential Elements

- Create the ICAAP policy with an eye to material risks

- Develop the risk models and reporting for each material risk including model enhancements and increasing sophistication in approach over time
 - Credit Risk
 - ALM
 - Market Risk

- To the extent possibly, keep uniformity in data, model assumptions, and risk metrics

Thank you



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