

Risk-based supervision under GRAPE*: using risk and bank teams

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Central Banking Training Series

Financial Regulation and Supervision: Design and Implementation

Cambridge, September 2016

**GRAPE - General Risk Assessment Program*

Outline

- Looking for efficiency: building organizational structure on specialization, synergies and streamlined incentives. The new role of
 - bank teams
 - specialized teams
- Pillar 2 under GRAPE – integrating risk assessment, stress tests in the capital add-ons;
- Closing the gap between micro and macro prudential regulation;
- GRAPE from international perspective
 - Pillar 2, stress tests and scenarios
 - Risk teams and bank teams

Looking for efficiency: building organizational structure on specialization, synergies and streamlined incentives

- **Specialization:** Is there benefit to specialize in on-site, off-site, licensing and policy vs. specialization in risk area or in institution?
 - Does onsite/off site requires different skills? Or assessment of say credit risk and liquidity requires?
- **Synergies:** Should we keep for same risk (e.g. credit risk) micro, systemic risk identification and risk assessment policy development compartmentalized or there are potential synergies to exploit?
- **Streamlined incentives:** is the ownership of the risk clear on the decentralized level?

Organizational Structure

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All risks across particular FI

All FIs/system across particular risk

FIs Departments

Action Plan

Specialized Department

Large Banks

Medium banks

Small banks

Other FIs

Corp. Credit Risk

Retail Credit Risk

Macropudential risks

Market Risk

Liquidity Risk

Operational Risk

Group structure Risk

Business model risk

Corporate governance

Micro-prudential supervision

Systemic risks/Macro prudential supervision

New role of bank/FI teams

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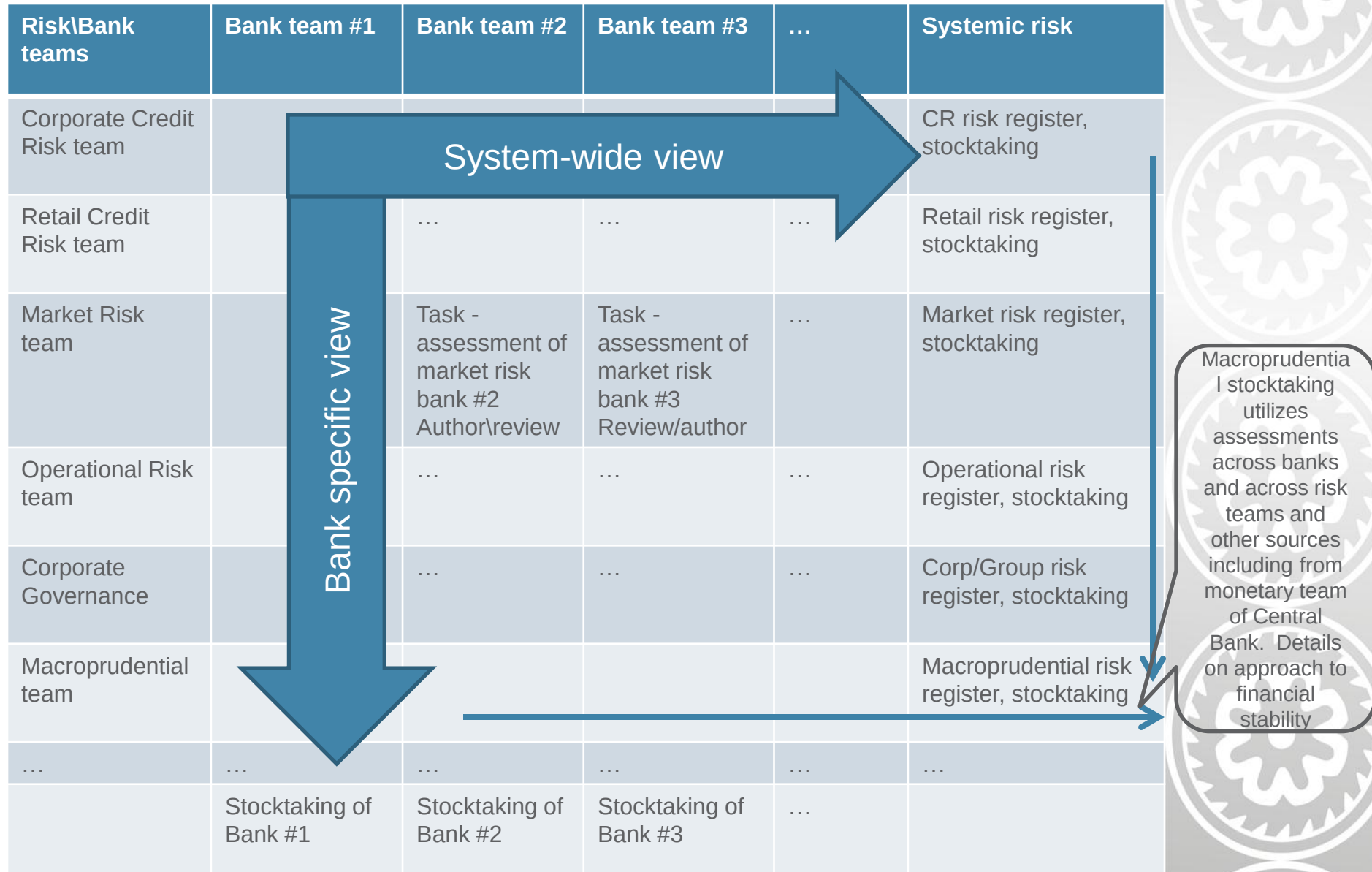
	Conventional approach	New approach
Onsite/offsite	There are separate units for onsite and offsite works	Onsite/offsite are just tools at supervisors disposal. Ownership of the risk is very clear.

New role of risk teams

	Conventional approach	New approach
Microprudential supervision	Bank supervisors take lead. Risk teams complement.	Can take leading on equal biases
Macroprudential risk identification	Financial Stability team takes lead.	Risk teams take lead, macro issues are discussed with monetary team
Integration and coordination of micro and macroprudential supervision	Limited micro knowledge in monetary teams and limited macro knowledge in supervisors makes integration practically challenging. Coordination is especially difficult.	Risk teams bridge the gap by participating in both micro and macro supervision. Macroprudential risk team aggregates all system-wide risks and coordination is not an issue.

Operationalizing structure

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Features of the system

- **Specialization:**
 - ***Bank teams: Know your bank.***
 - Supervisors integrate all knowledge about bank across different risks and have broad picture about specific institution.
 - Resource allocation across bank teams is risk based.
 - ***Risk teams: Know your risk area.***
 - Specialized risk teams integrate all specialized knowledge across banks and have broad picture about specific risk.
 - Specialized risk teams develop specialized risk identification and mitigation policy and constantly polish it as there is evidence of new developments in the field or in international practice.
 - Involvement of risk teams contribute to better benchmarking of the risk across banks.
 - Unlike many supervisory practices, where risk (specialist) teams are involved only at the end of bank assessment, here they are involved from very beginning being authors and/or reviewers of particular tasks (see next slides).
 - Apart from involvement in microprudential issues risk teams naturally have clear picture of systemic risks in their respective areas.

Features of the system (cont.)

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- **Accountability:**
 - Because of no separation of onsite-offsite jobs (covering same topic by onsite-offsite teams) there is clear accountable position for each institution and risk area.
 - 4 eyes principle. Every task is done by at least two teams (see next slide). Horizontal peer review process ensures high degree of reliability of risk identification process.
 - Horizontal structure encourages healthy exchange between teams and facilitates endogenous development of the teams.
- **Thematic view.** Assessments can be viewed as stocktaking of the FIs as well as stocktaking of the risks. Because of this invariance, one can say there are always ongoing thematic reviews. Thematic approach gives increases efficiency of the risk assessment.
- **Distribution of the stocktaking process.** Individual assessments of different risks normally are done on different dates and pooled together during bank's stocktaking (see the next slide).
- **From assessment to assessment.** Between these dates there is risk monitoring process which makes risk assessment/stocktaking at particular date highly efficient.

Risk Identification Program (RIP) illustrated

Risk Category	Prepared	Reviewed	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
<i>Retail Credit Risk</i>	Superv.	Spec. Gr.	■	■							■	
<i>Corporate & SME Credit Risk</i>	Spec. Gr.	Superv.		■	■	■				■		
Total Credit Risk	Superv.	Spec. Gr.									■	
Liquidity Risk	Spec. Gr.	Superv.			■	■	■	■			■	
Business Model and Profitability	Superv.	Spec. Gr.			■	■						
Market Risks	Spec. Gr.	Superv.			■							
Macroeconomic Environment	Spec. Gr.	Superv.			■							
Corporate Governance	Superv.	Spec. Gr.								■		
Group Structure	Spec. Gr.	Superv.									■	■
Operational Risk	Superv.	Spec. Gr.									■	■
Total Risk	■	■										■



Risk Report



Validation



Stock Taking

Pillar 2 under GRAPE

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- Pillar 2 add combines 2 components:
 - Regulatory stress tests
 - GRAPE risk assessment add-ons
- Risk assessment is tied to the specialized groups organizational structure:

	Stress test add-on	Other GRAPE add-on
Credit Risk		
Liquidity Risk		
Market Risk		
Operational Risk		
Business model&Profitability		
Macro-environment		
Group Structure		
Corporate Governance		

Regulatory enterprise-wide stress tests

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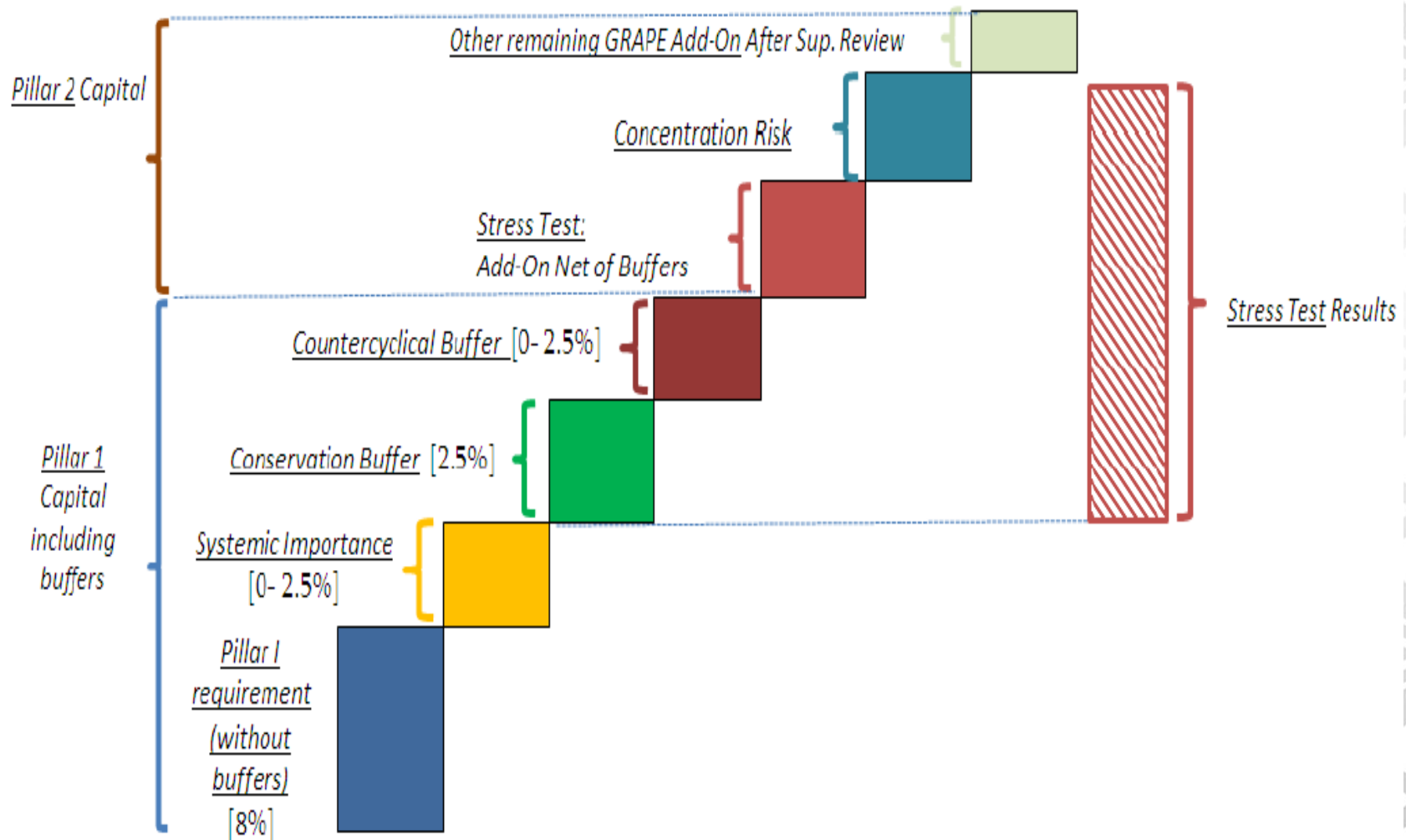
- NBG macroprudential risk team designs and regularly updates countercyclical time varying scenarios, taking into account:
 - stages of credit cycle (like credit/GDP gap);
 - other systemic risk developments or sector specific imbalances;
 - E.g. if oversupply in hotel industry is expected, higher sales drop in hospitality industry is assumed during the scenario design).
- Additional idiosyncratic scenarios might be added by a bank supervisor in case the bank has exposure to additional significant risk factors.
 - E.g. downgrade of the rating of a parent bank or concentration on a specific segment
- Enterprise-wide stress tests are micro-based, do not require high quality historical data, and are focused on debt capacity ratios:
 - For large corporates stress is performed on an individual level;
 - For granular portfolio statistical sampling methods are used.

Integration of supervisory stress tests with Pillar 2

- Stress tests are designed to be used for pillar 2 add-ons;
- Add-on is effective if it is greater than Countercyclical + Conservation buffer of Basel III;
- In many regards this approach avoids confusion between Micro and Macro Pillar 2 add-ons;
- The double requirement of capital for similar risks is also avoided;
- Macro scenario is important as bank resolution is always more difficult during systemic imbalances;
- Proactive regulatory approach in terms of understanding systemic as well as bank specific inherent risk is also required.

Stress tests and Pillar 2

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Closing the gap between micro and macro prudential regulation

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- Why this is important for Microprudential supervision?
 - Microprudential supervision incorporates macro and financial stability risks on the operational level, making RBS more effective.
 - Separate GRAPE category for Macroeconomic Environment allows straightforward integration of macroprudential risks in microprudential risk assessments.
 - Braking down and simplifying assessment process (eg CAMEL):
 - Traditional supervisory frameworks always contain reference to the systemic risks. In practice, it is difficult to implement.
 - E.g. CAMEL includes assessment of economic environment
 - Integration of stress tests in GRAPE makes process simpler and steps clearer.

Closing the gap between micro and macro prudential regulation (cont.)

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- Why this is important for Macroprudential supervision?
 - Involvement in microprudential supervision and aggregation process across FIs makes identification of systemic risks more efficient. (e.g. changes in lending or valuation standards because of competition that might change systemic risk).
 - Specialized macroprudential team aggregates information across systemic risks and other sources (e.g. fiscal, monetary, external balance) to identify financial stability risk drivers.
 - Specialized macroprudential team coordinates information flows in both ways:
 - From micro risk assessment to financial stability risks and from financial stability risks to micro-prudential risks.
 - Macro-financial linkages: impact of financial system on the macroeconomy and impact of macroeconomy on financial system (via. Stress tests).

GRAPE from international perspective

Stress Tests

- There is ongoing trend to combine capital requirements via Pillar 2 and stress tests.
 - **US:** [Tarullo \(2016\)](#) highlights countercyclical nature of scenarios used in Comprehensive Capital Analysis and Review (CCAR) and need to align stress tests with Basel III capital buffers.
 - **UK:** [PRA \(2015\)](#) describes methodology to combine stress tests and Basel III capital buffers. Also, [BoE \(2016\)](#) is developing an approach to stress testing that is explicitly countercyclical, with the severity of the test, and associated regulatory capital buffers, varying systematically with the state of the financial cycle.
 - **Sweden:** [Finansinspektionen \(2016\)](#) discloses that it intends to use stress tests to assess the size of the capital planning buffer.
 - **EU:** As clarified by [EBA \(2016\)](#), EU-wide stress test does not contain a pass fail threshold and is instead designed to be used as a crucial input into the SREP process in 2016.

GRAPE from international perspective

New role of specialized risk/bank teams

- Similar to GRAPE, expansion of the role of specialized risk/bank teams is evident also:
 - **US:** [Eisenbach et. Al. \(2015\)](#) describes FED's mix of firm-specific and horizontal reviews (top of page 5), the use of specialist risk teams (pages 13-15) many of whom spend a lot of time looking at a specific firm (page 19), the "continuous monitoring" of major firms (pages 23-26), and an annual cycle of planning and evaluation (page 34).
 - **EU:** ECB started to develop similar functional teams in supervision. Division IV where specialized teams are located is also involved in macroprudential regulation ([ECB 2015](#))

In lieu of conclusion

- FSAP (2015) assessment:
 - NBG made enormous progress in the supervisory tools and techniques they are using. In many ways NBG's approach is an example for other also developed countries. Three components characterize their approach:
 - *First, NBG uses a supervisory cycle (risk identification, assessment and mitigation) on the level of an individual risk. This makes NBG very flexible. This flexibility is balanced by periodical stock takes.*
 - *Second, there seems to be found an optimal integration and equal usage of bank supervisors and risk supervisor. Bank supervisors are responsible for banks across risks, risk supervisors are responsible for risks across banks, including systemic risk. Both supervisors do on-site and off-site activities. It is very clear who is responsible for which task.*
 - Third, NBG has a very powerful supervisory information system that enables the supervisor to do "online" supervision and rigorous data analysis. For example, NBG does not have to go on-site to do a loan review because it receives all credit files online which are connected to the information system. Furthermore the prudential returns have become much more granular. Both together are crucial for understanding the risk profile of a bank.
 - The NBG developed an advanced supervisory approach that is comprehensive, forward looking, and risk-based, proportionate to the systemic relevance of supervised banks. It is comprehensive because it addresses all risks emanating from banks and the banking system. It is forward looking because it includes elements such as stress test, business model, corporate governance, and capital and contingency planning. It is risk-based because it focuses on the most important risks.
- Interest from other supervisors:
 - Utilization of synergies allows to achieve high efficiency even with small supervisory resources and is applicable in different environments. Framework is actively shared with other countries.

References

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- BoE (2015) [”The Bank of England’s approach to stress testing the UK banking system”](#);
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- Tarullo D. (2016) [“Next Steps in the Evolution of Stress Testing”](#);
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THANK YOU!