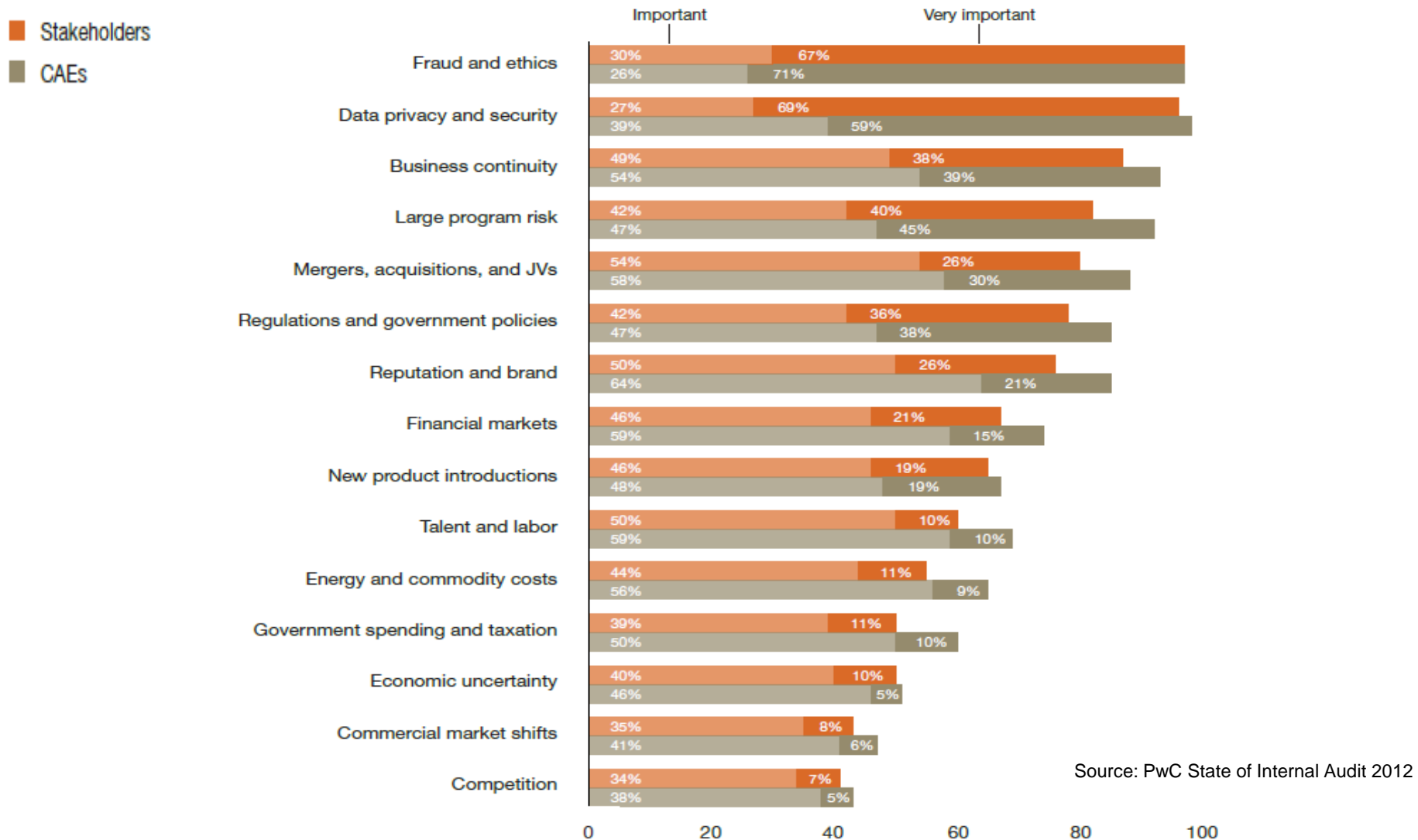# Evolution Of The Internal Audit Function:
From Controls Testing To Corporate Performance Management Insight

Agenda

- Evolving mandate for audit & business requirements
- Business controls auditing/monitoring maturity model
- Importance of real-time controls monitoring
- Q&A

New Audit Mandate – Business Control Monitoring

Figure 4: Importance of internal audit's contribution to monitoring each risk

Legend: Stakeholders, CAEs

Risk	Stakeholders Important	Stakeholders Very important	CAEs Important	CAEs Very important
Fraud and ethics	30%	67%	26%	71%
Data privacy and security	27%	69%	39%	59%
Business continuity	49%	38%	54%	39%
Large program risk	42%	40%	47%	45%
Mergers, acquisitions, and JVs	54%	26%	58%	30%
Regulations and government policies	42%	36%	47%	38%
Reputation and brand	50%	26%	64%	21%
Financial markets	46%	21%	59%	15%
New product introductions	46%	19%	48%	19%
Talent and labor	50%	10%	59%	10%
Energy and commodity costs	44%	11%	56%	9%
Government spending and taxation	39%	11%	50%	10%
Economic uncertainty	40%	10%	46%	5%
Commercial market shifts	35%	8%	41%	6%
Competition	34%	7%	38%	5%

Source: PwC State of Internal Audit 2012
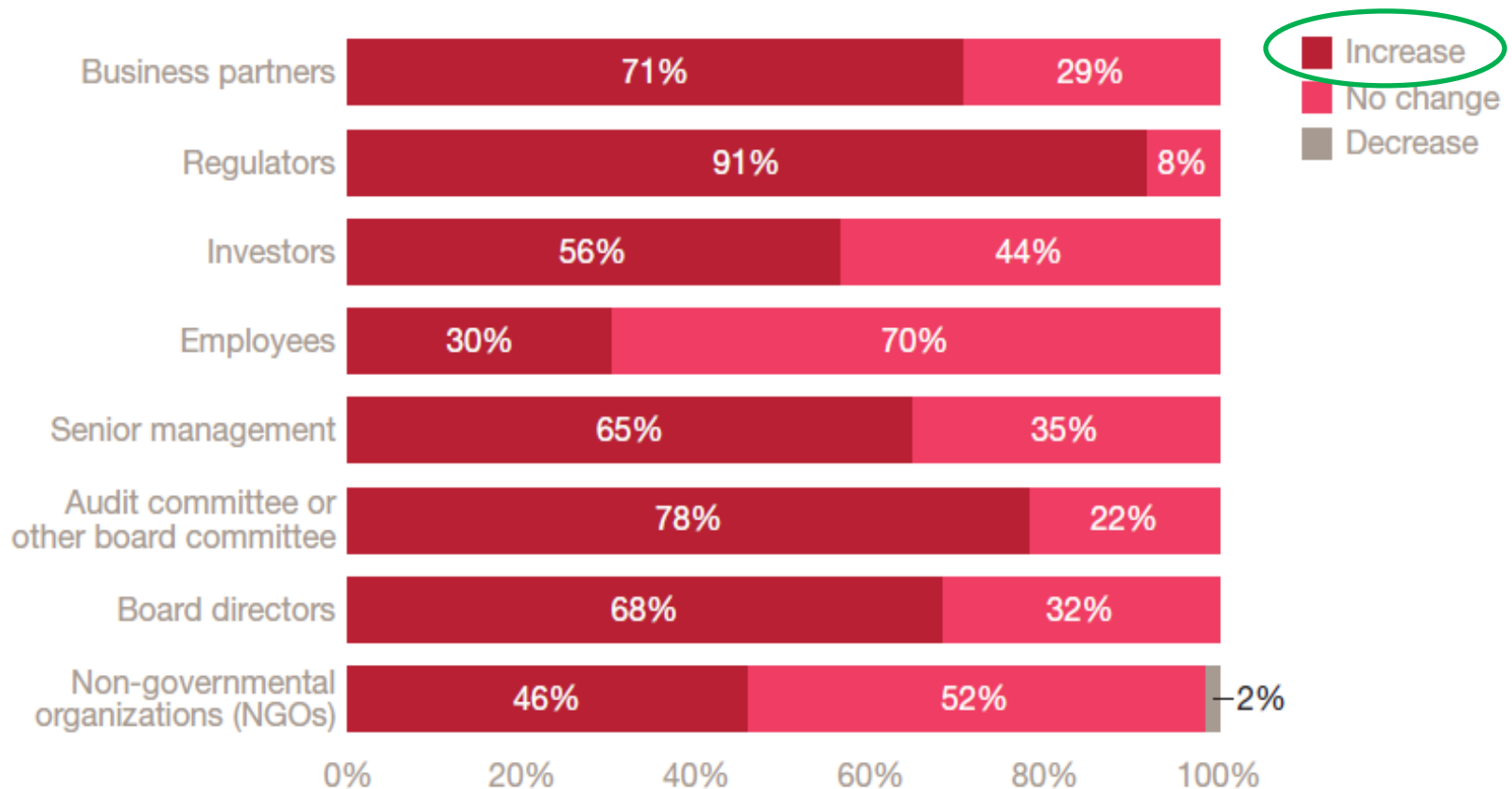
Audit Plans Map To Key Business Concerns

Table 3. Percentage of Audit Plan Composition for 2012

AUDIT FOCUS AREA	PERCENTAGE (ALL PARTICIPANTS)	PERCENTAGE (FORTUNE 500)
Financial	28%	36%
Operational	27%	24%
Compliance	15%	10%
Fraud	5%	5%
Strategic business risk	5%	5%
Effectiveness of risk management	4%	3%
Cost/Expense reduction or containment	2%	3%
Third-party relationships	2%	4%
Credit/Liquidity	2%	1%
Change management	2%	2%
Reputational risks	1%	1%
Mergers and acquisitions	1%	2%
Crisis management	1%	1%
Other	3%	3%

Source:
IIA Pulse of the Profession 3-12

Must Provide Transparency To Business Activities

Chart 1: How much will various stakeholders increase or decrease their demand for evidence of effective compliance in the next three years?

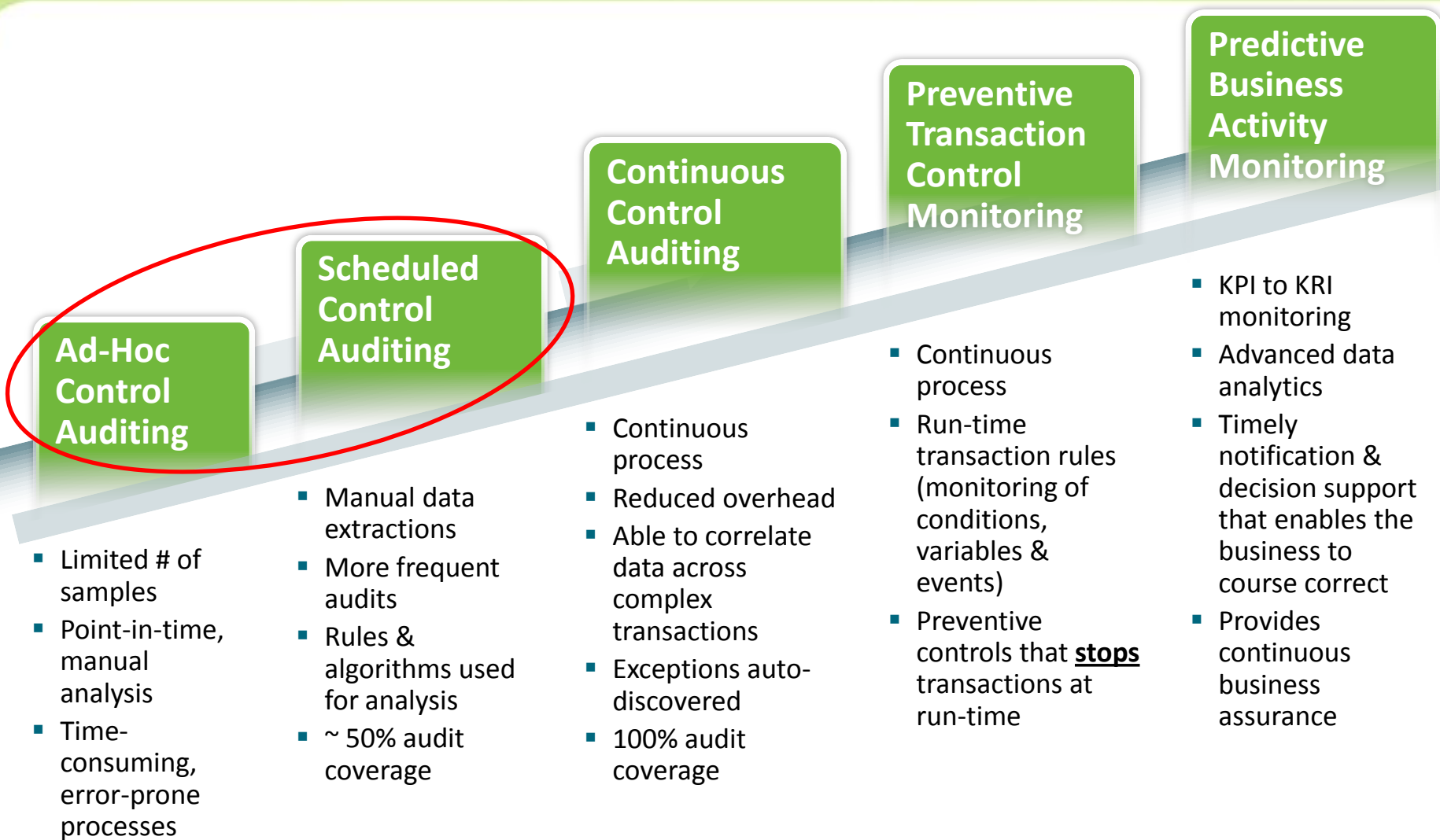| Stakeholder	Increase	No change	Decrease
Business partners	71%	29%	
Regulators	91%	8%	
Investors	56%	44%	
Employees	30%	70%	
Senior management	65%	35%	
Audit committee or other board committee	78%	22%	
Board directors	68%	32%	
Non-governmental organizations (NGOs)	46%	52%	-2%

Source: Compliance Week & PwC State of Compliance Survey 2012

Maturity Model For Business Controls Auditing/Monitoring

Internal Audit Maturity Model

Ad-Hoc Control Auditing

Scheduled Control Auditing

Continuous Control Auditing

Preventive Transaction Control Monitoring

Predictive Business Activity Monitoring

- Limited # of samples
- Point-in-time, manual analysis
- Time-consuming, error-prone processes

- Manual data extractions
- More frequent audits
- Rules & algorithms used for analysis
- ~ 50% audit coverage

- Continuous process
- Reduced overhead
- Able to correlate data across complex transactions
- Exceptions auto-discovered
- 100% audit coverage

- Continuous process
- Run-time transaction rules (monitoring of conditions, variables & events)
- Preventive controls that **stops** transactions at run-time

- KPI to KRI monitoring
- Advanced data analytics
- Timely notification & decision support that enables the business to course correct
- Provides continuous business assurance

Level 1 Business Control Maturity - Detective

Driver	Compliance (period-based)
Goal	Check-in-the-box (prescriptive risk management)
Control Classification	Period-based control testing & reporting
Audit	Design control (to mandate requirement), test & report
Value	Required (considered a sunk-cost to the business)
Measurement	Pass/fail (historical)

Level 2 Business Control Maturity - Preventative

Driver	Risk management (real-time event-driven rule analysis)
Goal	Enable business to respond (minimize loss, lagging indicator of failure)
Control Classification	Continuous monitoring (real-time action)
Audit	Design control (with business) & risk event analysis (automated control that business monitors, decision support for risk mitigation)
Value	Alerted (suggested remediation/mitigation actions)
Measurement	Threshold +/- pass/fail (actual)

Level 3 Business Control Maturity - Predictive

Driver	Dynamic business activity monitoring for Corporate Performance Management
Goal	Enables business to change outcome (leading indicator of success or failure)
Control Classification	Continuous monitoring (real-time action)
Audit	Design control (with business), KPI/KRI monitoring & analysis to project forward-looking outcomes
Value	Informed (decision support that drives corrective actions)
Measurement	Threshold +/- pass/fail (future), associative intelligence

Importance Of
Real-Time Controls Monitoring

Importance Of Real-Time Control Monitoring

Traditional

Traditional Batch Transaction Data Analysis

Multiple Steps:

1. Identify sample of cargo sales
2. Identify term changes made to cargo customers.
3. Combine both results to inspect cargo customer sales

Single System

Customer system

Shortcoming:
Limited sources
Data latency
Period-based

Result

Shortcoming:
Manual, point-in-time analysis, false/positives & cost

Advanced

Automated Transactional Data Analysis

Single Automated Step

1. Were cargo customer terms adjusted?
2. Are there any cargo items that might be out of the ordinary?
3. Were the customer contract terms changed, and revenue related transactions which might be considered suspicious?

Advantage: More comprehensive

Multiple Systems

1.   2.   3.

1. Cargo System
2. Customer System
3. Revenue System

Advantage: Correlation across multiple sources and events in real-time

Result

Detailed Analysis Reports generated

Advantage: Automated, consistent & 100% coverage

Q & A