

November 2017

# The evolving mandate of the Chief Data Officer in the Financial Services sector

Key insights from PwC's 2017 Chief Data Officer survey



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## ***1. Executive summary***

# Key global survey findings

Over the past 12 to 18 months we have observed that the Chief Data Officer (“CDO”) role in the financial services sector has been evolving, with a shift in focus from risk and regulatory issues to activities that support business growth. We wanted to understand the maturity of this trend and the factors driving the change. This survey was therefore commissioned to assess the drivers of the creation of the CDO role and how the CDO’s mandate is evolving.

The global survey responses indicate the following:

- There is clear recognition by CDOs of the **need to be more forward thinking and become involved in business activities that positively impact the top and bottom lines**. However, attention to regulatory matters hamper most firms from effectively pursuing these areas.
- Banking and Capital Markets sector respondents indicated, understandably, relative high attention focused on risk and regulatory topics. However, insurers and payments companies were **well ahead with respect to monetising data and using data analytics to focus on customer initiatives**.
- The organisations with **CDOs best positioned to influence the growth agenda are those with more mature data functions and more developed foundational data governance capabilities**. Some of these CDOs have expanded their remit to bring analytics functions into their organisations. These organisations are best positioned to improve their competitive position relative to laggards.
- The results indicate that CDOs are most effective on their own when driving items such as policy and standards. But **CDOs recognise they cannot drive change alone**. When implementation begins, a partnership is needed with the business and technology.

Respondents noted the following characteristics that contributed to successful data programs:



The proliferation of data, pace of technological change and increasingly competitive environment underscores the need to operationlise foundational data management capabilities (often built for regulatory needs) in order pivot to profit enhancing roles.



Alignment to business problems is critical. Doing data governance for data governance’s sake will lead to failure. Equally as important is communicating in a language to which the business can relate (e.g. using data to quantify customer impact or potential revenue gain or loss).



Setting realistic expectations and clarity for the CDO’s remit while aligning with the organisation’s priorities is key. Despite having senior management support, CDOs must consistently articulate and market their role and priorities to avoid falling victim to misaligned or unrealistic expectations.

The complete results and supporting data are on the following pages and we trust that you will find this report insightful. We would like to sincerely thank the respondents across the globe for their time and valuable insights.

# Local Australian market perspectives

## Australian organisations are still searching for the best fit CDO model

### Accommodating the evolving regulatory focus around data



- While Australia has experienced (and in some cases led) data and technology innovation, we have been slower to introduce regulatory changes in comparison to other jurisdictions.
- There is some evidence that the regulatory bar for data governance is now shifting, particularly in the Banking and Capital Markets sector.
- Australian CDOs that are well placed for this shift in focus have already taken steps to learn from other jurisdictions and established frameworks that meet the requirements, as well as ensuring that these frameworks provide the building blocks to realise commercial benefits from data.

### Maintaining stakeholder trust around the collection, use and sharing of data



- Leading Australian CDOs have recognised that maintaining the trust of customers and other stakeholders around the collection, use and sharing of data is essential.
- This is driving governance convergence around data management, data protection and data privacy – that is, a more coordinated approach to managing the risks and opportunities arising from the increased sharing and usage of data.
- As a consequence, data use governance, the ‘ethical’ collection, use and sharing of data, is an emerging area of focus for Australian CDOs.

### The ‘open data’ agenda and new competitive threats



- The proposed open data regime is pushing toward greater data accessibility and organisational control over data disclosure, opening organisations to potential new data risks.
- New, non-traditional competitive threats are forcing organisations to explore the monetisation potential in their data. Data governance is now being viewed as a strategic business enabler.
- The challenge for the Australian CDO is achieving consistent alignment in data priorities across the organisation in a commercially pragmatic way.

### Emerging uses of data driving a renewed push to revisit data governance foundations



- Data enrichment, through collaboration with internal or external partners, is changing how data is collected and how insights are generated about customers.
- The effectiveness of emerging technologies, such as machine learning, predictive analytics and the pursuit of personalisation of the customer experience are somewhat dependent on availability of good quality data.
- An effective Office of the CDO needs to be aligned with the desired business, customer and regulatory outcomes. It also requires a clear purpose, distinct from, yet supportive of, the Digital, Analytics and Information Technology mandates.

# Profile of the Office of the CDO

## Formal CDO appointment

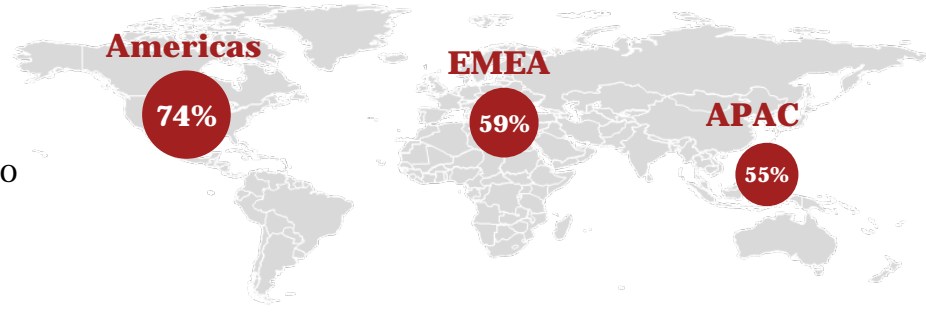
**66%**



of respondents have a formally named Chief Data Officer

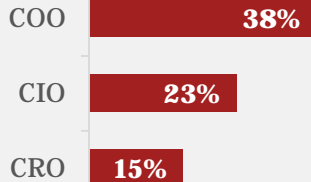
The average CDO has been in the role for 3.1 years

% of respondents, by geography, with a CDO appointed



## Reporting line

**38%**



of CDOs report to the COO

Includes top 3 reporting lines, see section 3 for details.

## Size

**44%**



of CDOs indicated having a CDO office headcount in the 1-30 range

## Funding model

Source of Funding



## What drove creating CDO role?

**3 out of 4**

respondents noted **risk and regulatory compliance** was the highest driver for creating the CDO role



## Sector-specific CDO priorities

Banking & Capital Markets 

**86%** of banking respondents noted **risk and regulatory compliance** as a high driver

Asset Management 

**100%** of asset management respondents noted **risk and regulatory compliance** as a high driver

Insurance 

**60%** of insurance respondents noted **growth** as a high driver. Only 10% noted regulatory compliance as a high driver

Other Non-Bank FS 

**67%** of Other Non-Bank FS respondents noted **risk and regulatory compliance** as a high driver

# CDO remit and operational maturity

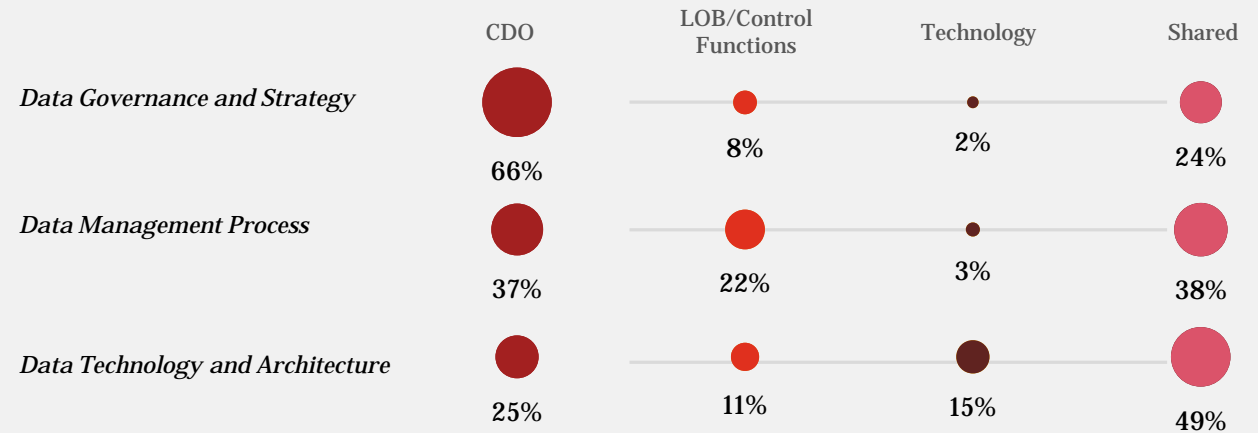
## CDO remit

**66%**



of respondents noted enterprise data governance & strategy falls fully under the remit of the CDO

### Organisational responsibility for data governance, management and technology



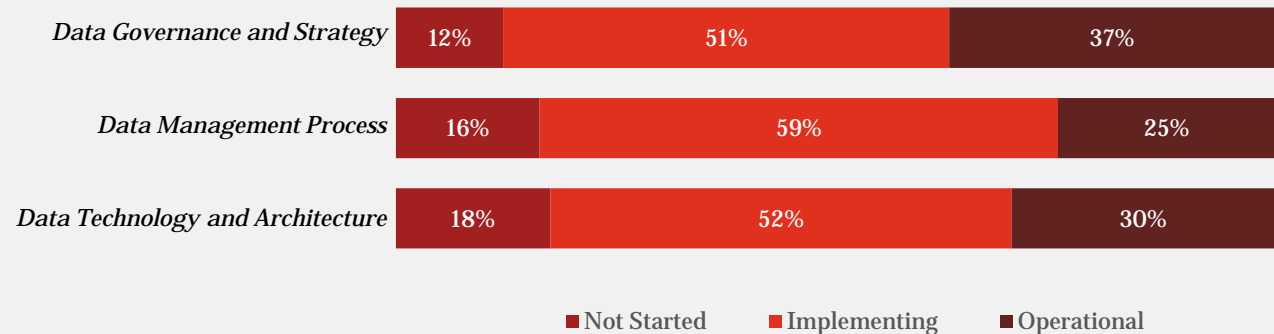
## Operational maturity

**51%**



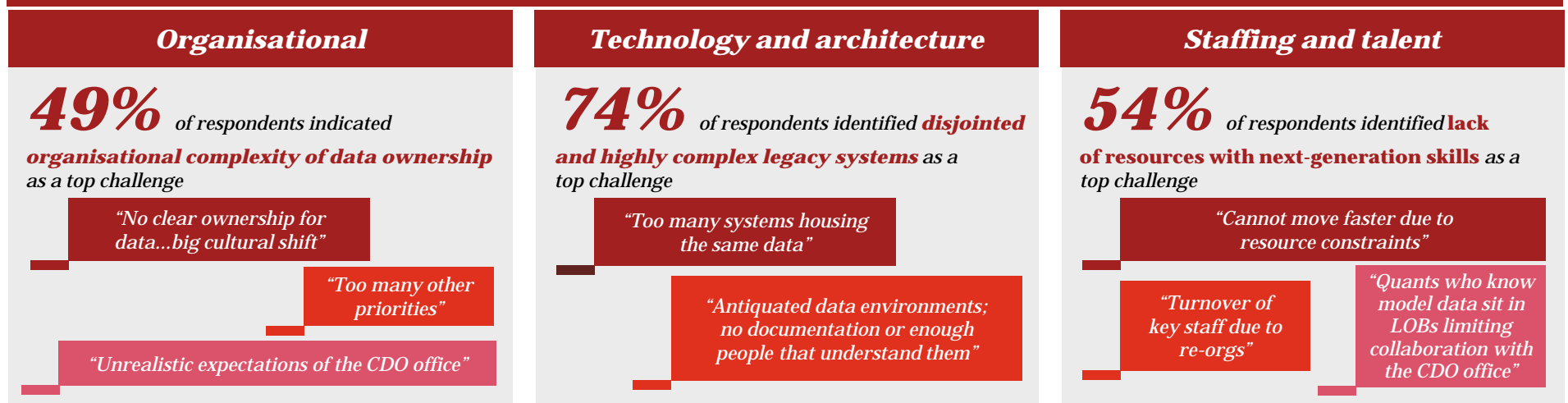
of the industry is still working to stand up enterprise data governance

### Maturity ranking of data governance, management and technology



# CDO challenges and future priorities

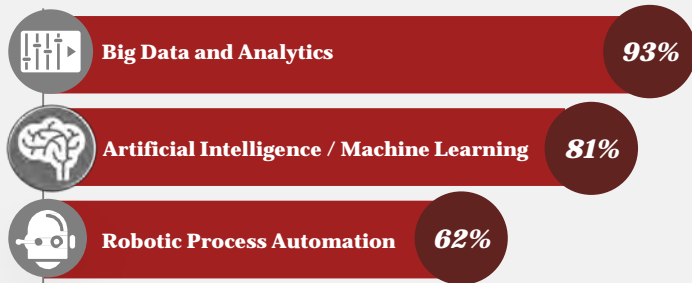
## Top CDO Challenges



## Future Priorities for CDOs

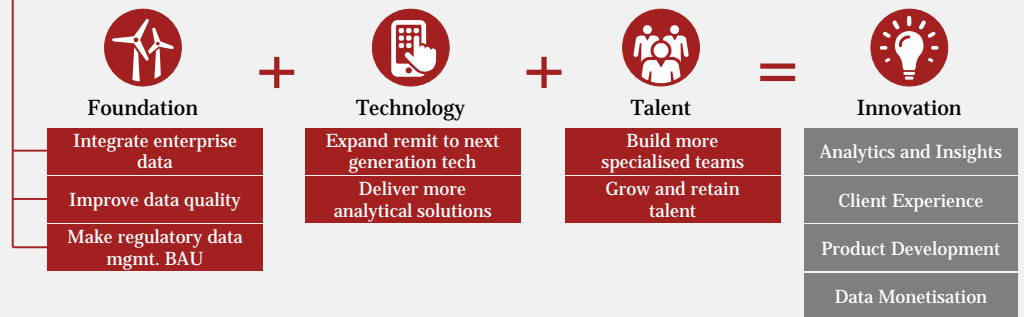
Many financial services CDOs are looking to innovate and invest in emerging data technologies...

% of CDOs that identified the following next generation data technologies as transformational to how their organisations will use and monetise data



...but are still focused on foundational data management in the near term

Key priorities that CDOs plan to pursue in the next few years along foundational data management and innovation







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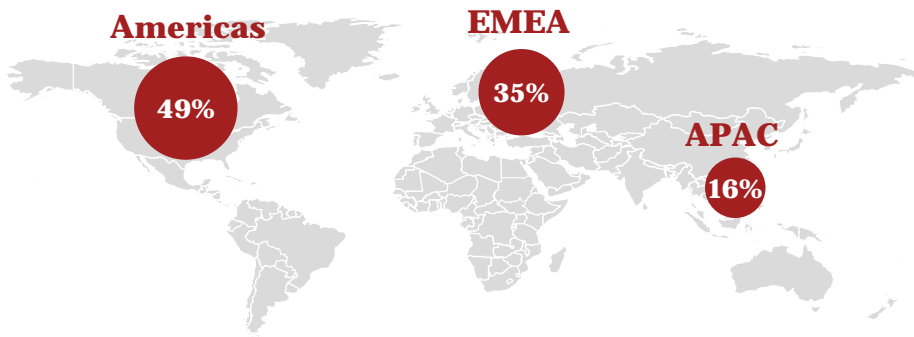
## ***2. Survey overview***

# Survey overview and scope

### Overview

- PwC conducted a global benchmarking survey between May and August 2017 on the evolving role of the Chief Data Officer (CDO).
- We interviewed CDOs (or officers that have an equivalent role) and collected data to examine the CDO's various organisational models, size, scope of responsibilities, drivers for their agenda, data management practices, challenges, and future priorities.
- 74 respondents from 64 financial services firms participated in the survey, representing 13 countries across the Americas, EMEA, and APAC.
- 82% of the responses were collected through online survey, and 18% by face-to-face interviews.

### Scope of coverage



**74**

Respondents

**64**

Financial services firms

**13**

Countries across the  
Americas, EMEA, and  
APAC

### Key survey notes

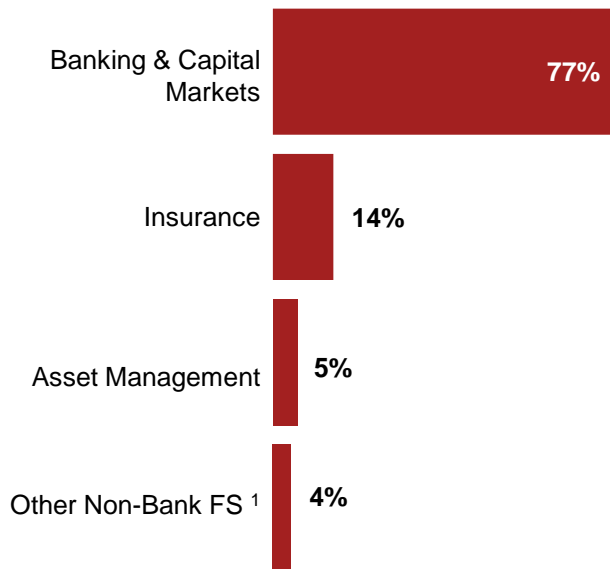
- This report provides an aggregated view on the responses, along with key insights.
- Not all figures add up to 100%, due to overlapping responses between choices or exclusions of 'N/A' or 'don't know' responses.
- The base number of responses is 74 (all respondents) unless otherwise stated.

We would be pleased to share additional insights and discuss the survey in more detail with you. Please feel free to contact one of the PwC representatives noted at the end of this report.

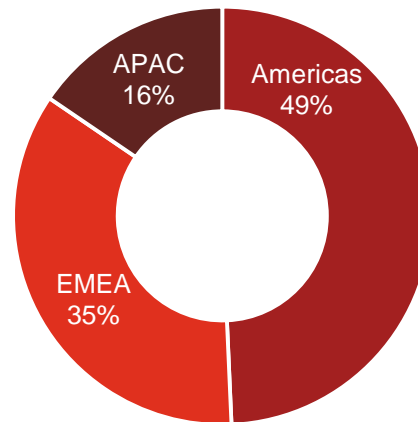
## Financial services respondent profile

- Results of the 2017 global CDO survey are based on 74 respondents from 13 countries across the Americas, EMEA, and APAC.
- 66% of respondents were CDOs, while 16% were respondents with an equivalent role. Nine percent represented organisations that have a central data management function with representation from business, IT, and control departments but no CDO or equivalent role. Nine percent of respondents have a fully decentralised data management approach.
- Respondents of the survey covered a variety of financial services firms many with a diverse global footprint and size. 60% of G-SIBs (Global Systematically Important Banks) are included in this survey.
- Where relevant, we provide benchmarking details by geography or financial sector.

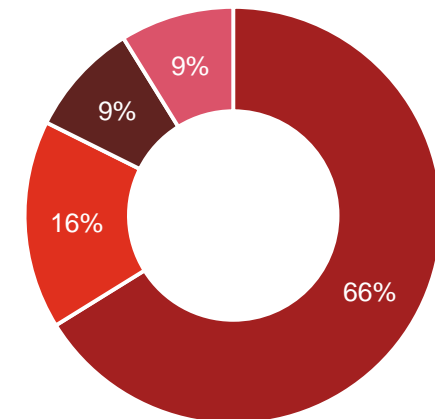
### Respondents by financial sector



### Origin of respondents



### Role of respondents



■ Formal CDO ■ CDO Equivalent ■ Centralised Data Function ■ Decentralised Model

<sup>1</sup> Other Non-Bank FS includes respondents from credit unions and payments providers.

# Terminology and navigation guide

## Key terminology

- Based on our study and responses to this survey, the following are key terms relating to the CDO role:
  - **A formally “named” role:** a c-suite officer exists and holds the CDO title
  - **An “equivalent” role:** no formally named CDO but a role exists with similar “CDO” responsibilities
  - **A central data management function:** organisation has no CDO or equivalent role but a central data governance body
  - **Decentralised:** data management is fully decentralised and managed by lines of business and control functions, no CDO or equivalent role
- Other terms in the survey include:
  - **Office of the CDO:** a formally established and staffed organisation that reports to the CDO (or equivalent role). We have used “CDO” or “Office the CDO” interchangeably depending on the context of the question and data points collected
  - **LOB:** Line of Business
  - **Control function:** includes organisational entities such as Finance, Risk, Operations, and Compliance

## Navigation guide

The diagram illustrates a navigation guide for a survey slide. The central slide is titled "3. Profile of the Office of the CDO" and contains the following content:

- Section Header:** 66% of respondents have named a Chief Data Officer, 16% have a CDO 'equivalent' role
- Questions:** Q3: recognising there is no one-size-fits-all model for the CDO, which is closest to your organisation's? Q4: Please select best option that applies to the CDO role (or equivalent role / function).
- Manifestation of the "CDO role"** (Bar chart):
  - Formal CDO: 66%
  - CDO Equivalent: 16%
  - Centralized Data Function: 9%
  - Decentralized Model: 9%
- Key Findings and Insights:**
  - 62% of Financial Services respondents have named a CDO or equivalent role without the CDO "title" (i.e., a de facto CDO).
  - For the 46% that have an "equivalent" CDO role, they carry various titles depending on their organization and remit, such as "Head of Data Governance," "Head of Data Management," "VP of Data Management or Governance."
  - The 9% of respondents that have a centralized data management function without a formal CDO (or equivalent role) have instead established governance frameworks to manage data regionally and globally. They carry such titles as "Enterprise Data Governance Council," "Data Governance Board" and include cross-LOB and cross-functional senior management representation.
  - Our study indicates that the degree of "centralization" varied greatly across organizations, where many have centralized certain CDO responsibilities but kept others federated. For instance, while many CDOs are working to centralize enterprise data and policies as well as the role data plays at their firms, we found that ownership of data analysis, modeling, and data science capabilities are often federated across LOBs.
  - Approximately 64% of G-SIBs surveyed have a federated organisational model with a "group" or "enterprise" CDO operating globally, and regional or LOB / functional CDOs responsible for data governance and management locally.
- CDO Organisational Models** (Donut chart):
  - Central Model: 66%
  - Federated Model: 44%
- Central Model** (Diagram):
  - Key Characteristics: CDO, Enterprise-wide responsibility, Central governance and data management activities, which are then operationalized in LOBs for implementation.
- Federated Model** (Diagram):
  - Key Characteristics: Multiple enterprise-wide CDOs with the Enterprise LOB CDOs or equivalent roles and who have direct operating data to the enterprise CDO.

Callouts from the diagram:

- Survey question:** Points to the Q3 and Q4 text.
- Key insights and observations:** Points to the "Key Findings and Insights" section.
- Survey section guide:** Points to the "3. Profile of the Office of the CDO" header.
- Key result/takeaway for survey question:** Points to the main headline "66% of respondents have named a Chief Data Officer, 16% have a CDO 'equivalent' role".
- Charts to represent responses:** Points to the bar chart and donut chart.



### ***3. Profile of the Office of the CDO***

The majority of financial services firms have established a CDO role or someone with equivalent responsibilities over the last three to five years. Despite the short tenure of these roles, there is ongoing evolution in the organisational structure of the CDO role including reporting line, size, funding model, scope of responsibilities, and priorities.

Across the financial institutions we surveyed, the remit and organisational models of the CDO office are shaped by: 1) the financial sector of the organisation, 2) the size and geographic footprint of the organisation, 3) maturity of both the role and data management practices in general, and 4) the local regulatory environment.

Many respondents attributed establishing the CDO role to regulatory drivers. There is now a strong focus on leveraging original investments focused on regulatory programs toward areas that can drive strategic benefits such as: innovations that monetise data, better aligning with business strategy, supporting analytics functions and communicating across the enterprise the value and benefits of partnering with the CDO.

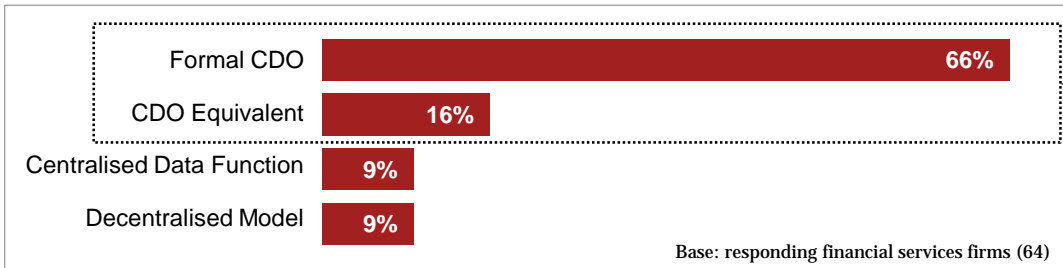
### 3. Profile of the Office of the CDO

## 66% of respondents have named a Chief Data Officer, 16% have a CDO 'equivalent' role

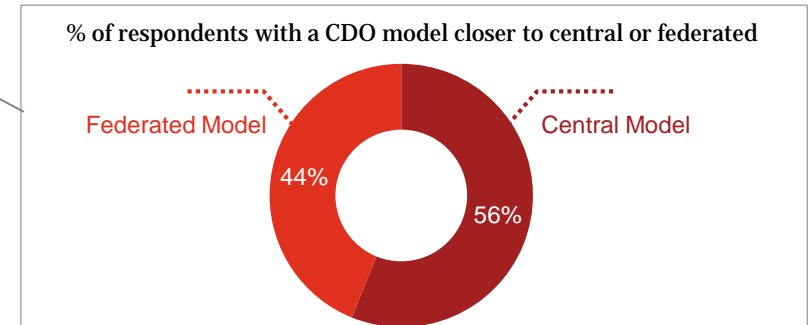
Q3. Recognising there is no one-size-fits-all model for the CDO, which is closest to your organisation's?

Q4. Please select best option that applies to the CDO role (or equivalent role/function).

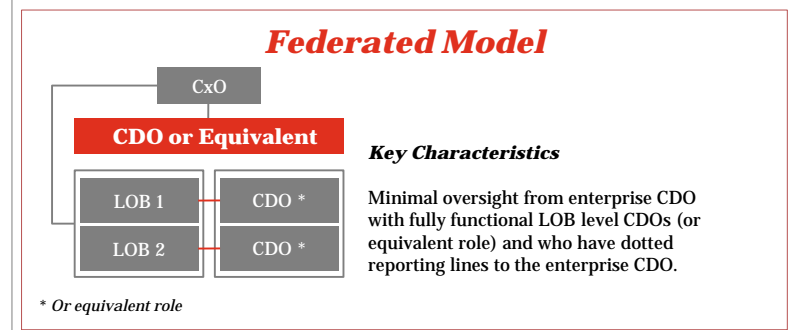
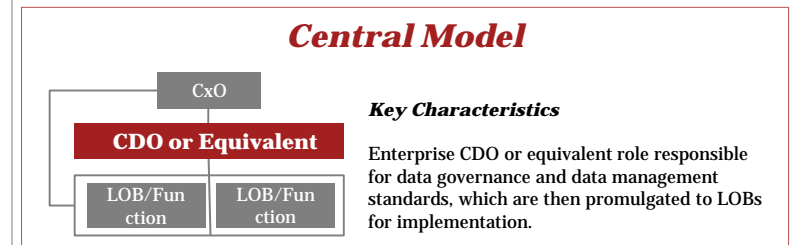
#### Manifestation of the "CDO role"



#### CDO organisational models



An illustration of observed archetypes for the CDO's operating model



#### Key findings and insights

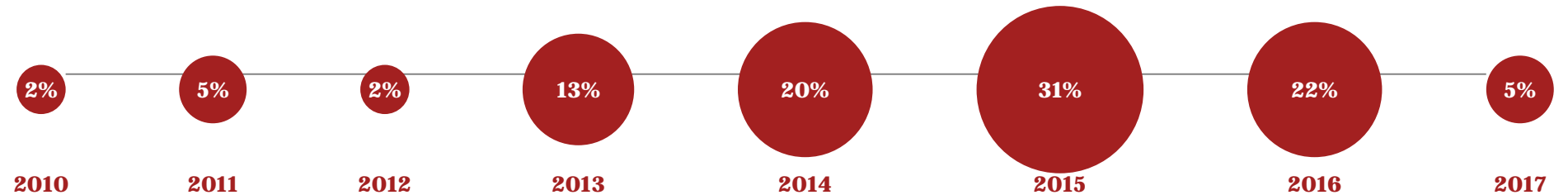
- 82% of Financial Services respondents have named a CDO or equivalent role without the CDO "title" (ie a de facto CDO).
- For the 16% that have an "equivalent" CDO role, they carry various titles depending on their organisation and remit, such as "Head of Data Governance," "Head of Data Management," "VP of Data Management or Governance."
- The 9% of respondents that have a centralised data management function without a formal CDO (or equivalent role) have instead established governance frameworks to manage data regionally and globally. They carry such titles as "Enterprise Data Governance Council," "Data Governance Board" and include cross-LOB and cross-functional senior management representation.
- Our study indicates that the degree of "centralisation" varied greatly across organisations, where many have centralised certain CDO responsibilities but kept others federated. For instance, while many CDOs are working to centralise enterprise data and policies as well as the role data plays at their firms, we found that ownership of data analytics, modelling, and data science capabilities are often federated across LOBs.
- Approximately 65% of G-SIBs surveyed have a federated organisational model with a "group" or "enterprise" CDO operating globally, and regional or LOB/functional CDOs responsible for data governance and management locally.

### 3. Profile of the Office of the CDO

## 78% of respondents indicated that the CDO was appointed between 2014 and 2017

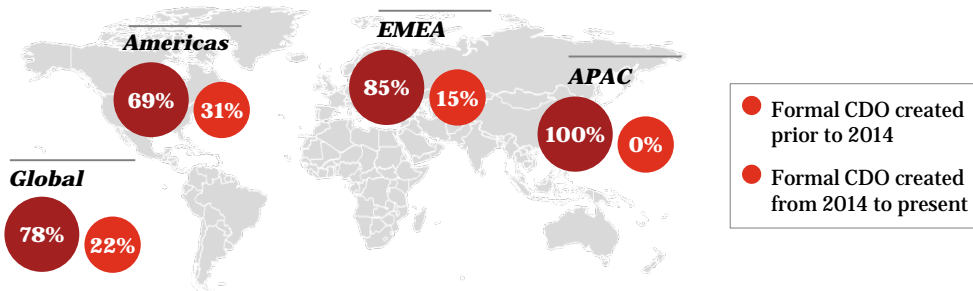
Q5. When was the CDO role or equivalent role/function established?

Year CDO role was established<sup>1</sup>



Base: formally named CDOs (45)

### CDO adoption by region



### Key findings and insights

- For majority of respondents the role has been in place for nearly 3 years. This is likely due to continually rapid proliferation of data, and heightened regulatory expectations around data management and quality, fueling prominence of the role.
- Our study indicates the North America region has led the way in appointing the CDO role (based on # of respondents with CDO title and duration), followed by EMEA, then APAC.
- 74% of respondents with a formally appointed CDO in the last three years indicated that risk and regulatory compliance was the highest driver for creating the role.
- 50% of responding G-SIBs have had a formally appointed CDO for three years or less, which we believe is largely driven by increased need for regulatory compliance such as BCBS239, which holds G-SIBs to higher standards for data management and aggregation.

### What fueled growth in the CDO role?<sup>2</sup>



<sup>1</sup> Data represents only respondents who identified as having a named CDO, details for all roles can be found in appendix

<sup>2</sup> Please see question #9 for more details on what drove creation of the CDO role

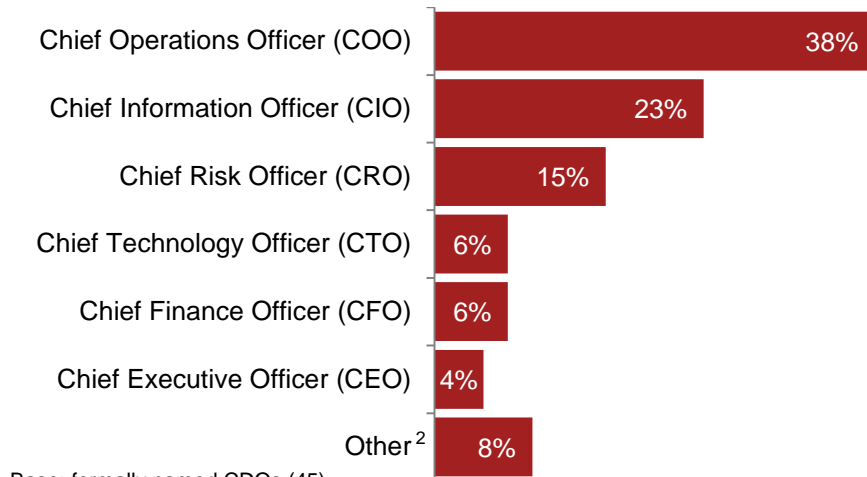
### 3. Profile of the Office of the CDO

## 38% of responding Chief Data Officers report to the Chief Operations Officer

Q6. To whom does the CDO (or equivalent role/function) report?

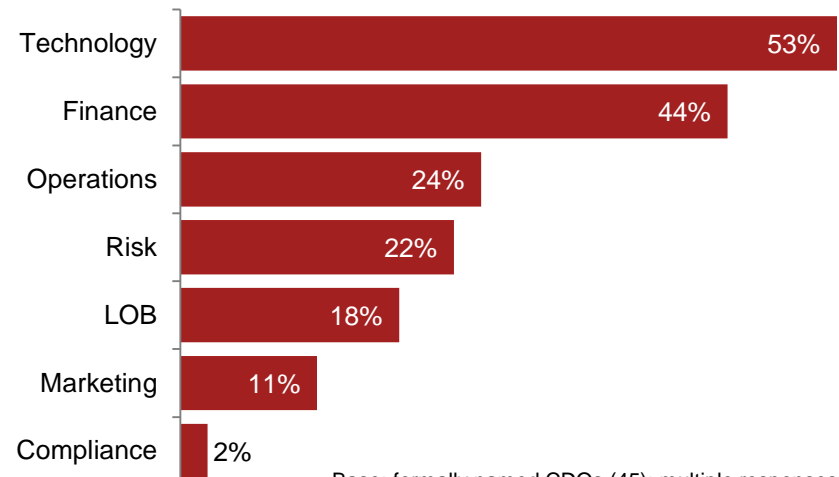
Q7. What is the professional background of your organisation's CDO?

#### CDO reporting line <sup>1</sup>



Base: formally named CDOs (45)

#### CDO's professional background



Base: formally named CDOs (45); multiple responses allowed

#### Key findings and insights

- We observed a wide range of responses relating to reporting structure, which is likely driven by the fact that organisations have their own definition of the role, unique reporting hierarchies, funding models, and data management priorities. In addition, the relatively short tenure of the role across financial services means that organisations are still figuring out what falls in the remit of the CDO. We expect that as the CDO continues to gain momentum, credibility, and increased focus on data analytics and strategy, reporting lines will begin to shift to lines of businesses or the CEO.
- Although the majority of CDOs report to a traditional C-Suite member, the 8% that responded with “other” indicated a reporting structure directly to the business (e.g. VP of a LOB). We noticed a correlation between these respondents and the strategic nature of their role (eg majority of them rated “Growth Drivers” for the CDO priorities as high).
- We found a relatively high degree of mixed professional backgrounds with responding CDOs. 49% of respondents noted having some combination of the following professional backgrounds: finance, technology, risk, compliance, operations, marketing, and LOB.

<sup>1</sup> Data represents only respondents who identified as having a formally named CDO, detail of all roles can be found in appendix

<sup>2</sup> Other reporting line responses varied and include: Chief Risk & Information Management Officer, Business Division head, and VP of Business Unit



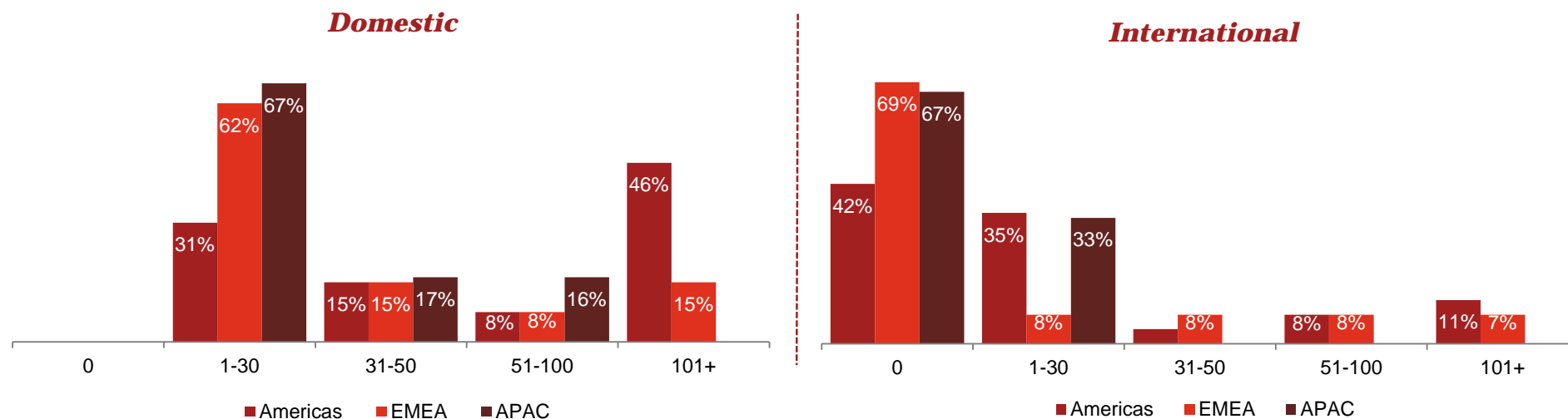
### 3. Profile of the Office of the CDO

## 44% of formal CDOs indicated having a CDO office with a domestic full time employee headcount in the 1-30 range

**Q8. How many resources comprise the office of the CDO (or equivalent function)?**

### Headcount by region

Responses to this question were from the perspective of the respondent (ie the location of the CDO respondent is their domicile. International staffing is outside of their domicile).



Base: formally named CDOs (45)

### Key findings and insights

- The responses to this question were from the perspective of the respondent (ie the location of the CDO respondent is their domicile. International staffing is outside of their domicile). 44% of CDO respondents indicated having a CDO office headcount in the 1-30 range domestically.
- 26% of overall respondents indicated insufficient staffing as a high challenge for the office of the CDO. The majority of these respondents had a headcount of 1-30 and their CDO office was established over the last two the years. This is consistent with our industry observation where the CDO office typically starts with very few direct reports.

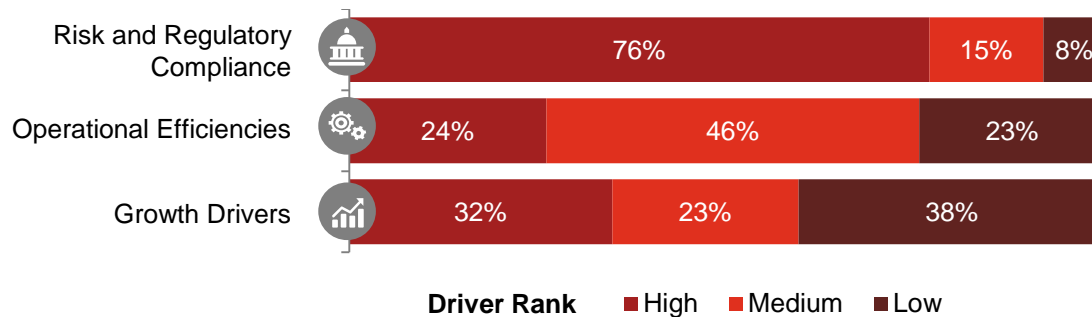
### 3. Profile of the Office of the CDO

# 76% of respondents identified Risk & Regulatory Compliance as the primary driver for establishing their CDO office

## Q9. What drove the creation of the CDO role (or equivalent role/function)?

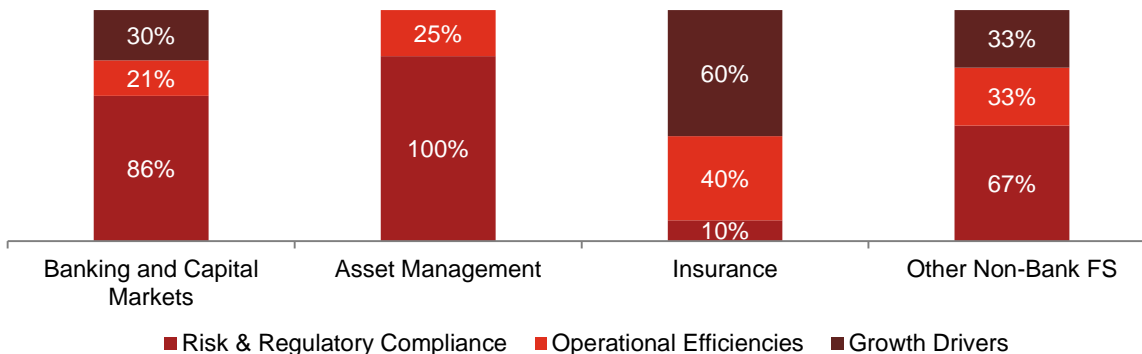
### Drivers for creating the CDO role

Responses to this question were from the perspective of the respondent (ie the location of the CDO respondent is their domicile. International staffing is outside of their domicile).



Base: all respondents (74); excludes N/A responses

### % of high driver rank by sector



Base: all respondents (74); multiple responses allowed

### Key findings and insights

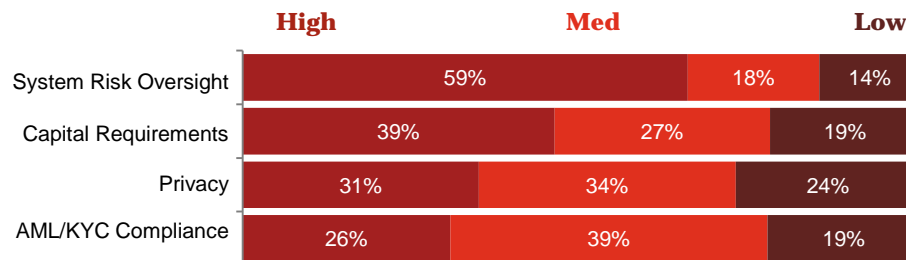
- 100% of responding G-SIBs indicated that risk and regulatory compliance was the primary driver for creating the CDO office and is likely to continue to dominate the CDO agenda due to increased regulatory oversight (eg additional capital and liquidity requirements) and related data-intensive needs.
- Overall, we did not find material differentiation by geography for what drove creating the CDO role, however, we found a more material difference in responses by financial services sector. Insurance and non-bank sectors (eg payments) indicated risk and regulatory was the lowest driver for establishing the CDO role compared with banking, capital markets, and asset management sectors.
- Many respondents indicated that as their financial institutions are reaching a state of maturity, there is a more increased focus on leveraging regulatory investments to monetise for growth.
- Several of the CDOs we interviewed indicated that the regulators are beginning to take a closer look at their entire remit. They are positively viewing CDOs mandates that go beyond regulatory topics and include supporting business strategy.

### 3. Profile of the Office of the CDO

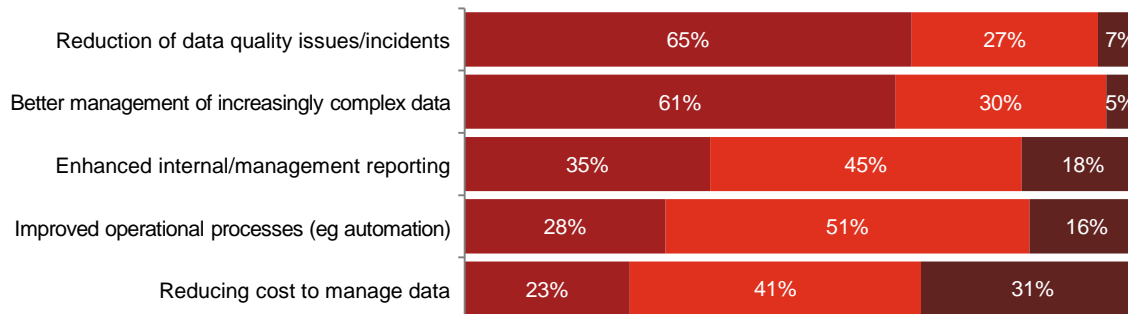
## 65% of respondents noted reduction of data quality issues/incidents as a high priority

**Q10. Please select the relative priorities for the CDO office (or equivalent role/function).**

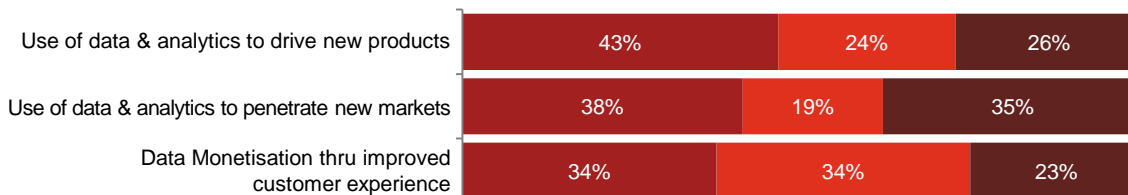
#### Risk and regulatory compliance



#### Operational efficiencies



#### Growth drivers



Base: all respondents (74); excludes N/A responses

#### Key findings and insights

- There is a general correlation across the top three priorities (systemic oversight, data quality and managing increasingly complex data) in the context of regulatory expectations and the recognition that comprehensive and quality data is required to manage risk across the organisation.
- Global diversified banks ranked risk and regulatory compliance drivers as the highest priorities, and growth drivers the lowest. The reverse held true in the insurance and payments sector.
- 27% of respondents identified other regional risk and regulatory areas of importance to the CDO such as: CECL, CFTC, IFRS9, and MiFID.
- 34% of respondents ranked privacy as a Medium priority. However, with the advent of the EU General Data Protection Regulation (“EU GDPR”) in May 2018, we expect the CDO’s role to be impacted by the EU GDPR and privacy will become more of a focus in 2018 and beyond.
- A number of CDOs ranked growth drivers as high or medium but noted that having analytics functions and growth topics are outside their remit. Based on our industry observation, organisations that have analytics functions closely aligned to the CDO Office are better positioned to provide insights to the business.

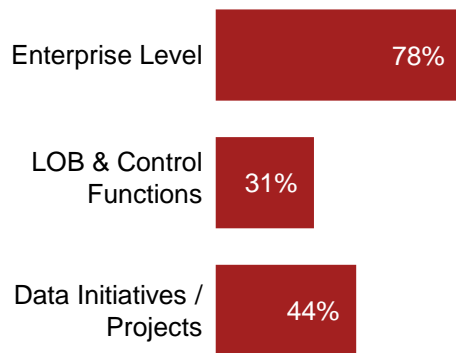
### 3. Profile of the Office of the CDO

## Majority of respondents noted funding occurs at the enterprise level with a focus on risk & regulatory spend

Q12. How is the office of the CDO (or equivalent role/function) funded?

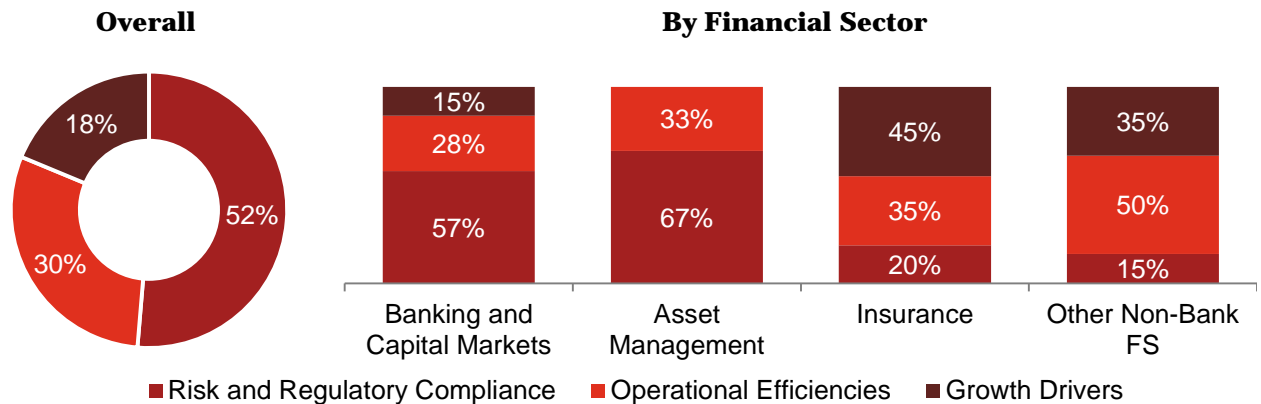
Q13. What percentage of the CDO (or equivalent role/function) is allocated across the following areas this year?

#### CDO Office funding models



Base: formally named CDOs (45); multiple responses allowed

#### Where are the funds allocated?



Base: formally named CDOs (45)

#### Key findings and insights

- 78% of CDO respondents indicated the CDO office is funded centrally. 31% of CDO respondents indicated their funding comes from business units or control functions (eg Finance or Risk), often to drive data projects tailored to the needs of that LOB or control function.
- More than half of the banking CDO respondents indicated 70-100% of their budget on risk and regulatory compliance activities. This is not surprising considering the stringent regularly requirements these banks face and need to invest heavily in data transformations programs to address these requirements.
- Although Risk & Regulatory Compliance is indicated as the primary driver for creating the Chief Data Office role, budget allocation suggests operational efficiencies related initiatives (eg automation of data quality profiling) may be just as significant.
- Expansion of “big data” technologies across organisations will likely strengthen the case for CDOs to further centralise budget allocation and spend to ensure consistency of data and technology use across multiple LOBs/functions across the enterprise.



## ***4. CDO remit and operational maturity***

Proliferation of data continues to fuel the prominence and expansion of the Office of the CDO. The scope of many CDOs is expanding from foundational data management capabilities and policies to ownership of platforms and oversight and execution of data-related programs. For instance, one CDO noted ownership of an ‘innovation lab’ that develops analytical products to support key business needs, such as a 360 degree customer view for Financial Advisors.

In this section, we explore where responsibilities for key data management areas are distinct or overlapping between the CDO office and LOBs, Control Functions, and Technology. We also assess the maturity of the office of the CDO using a three-point scale defined below:

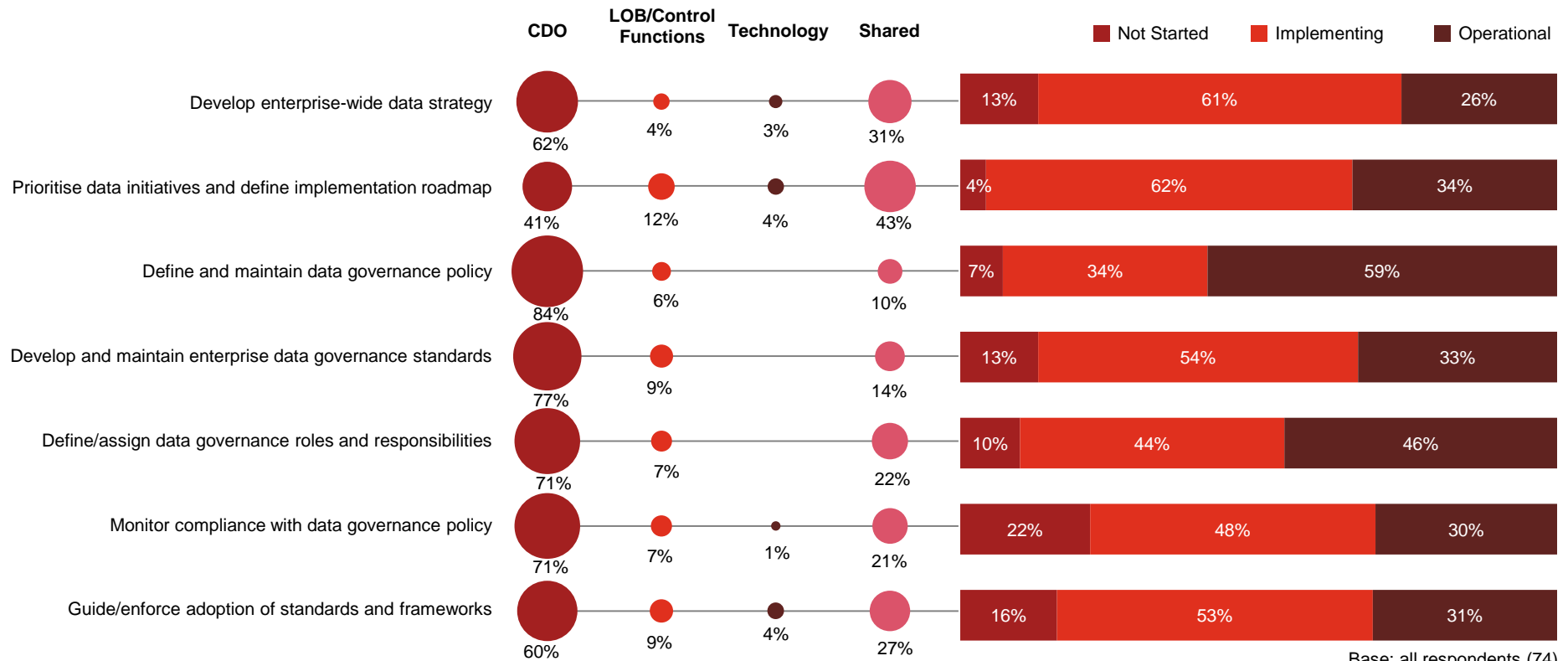
- **Not Started:** capability in planning stage or not yet budgeted
- **Implementing:** capability has been planned and in process of implementation
- **Operational:** capabilities are established and evolving toward adoption

## 4. CDO remit and operational maturity

# 51% of the industry is still working to stand up enterprise data governance

**Q14. Please identify responsibility for the following data governance and strategy capabilities as well as your maturity**

### Data governance and strategy



### Key findings and insights

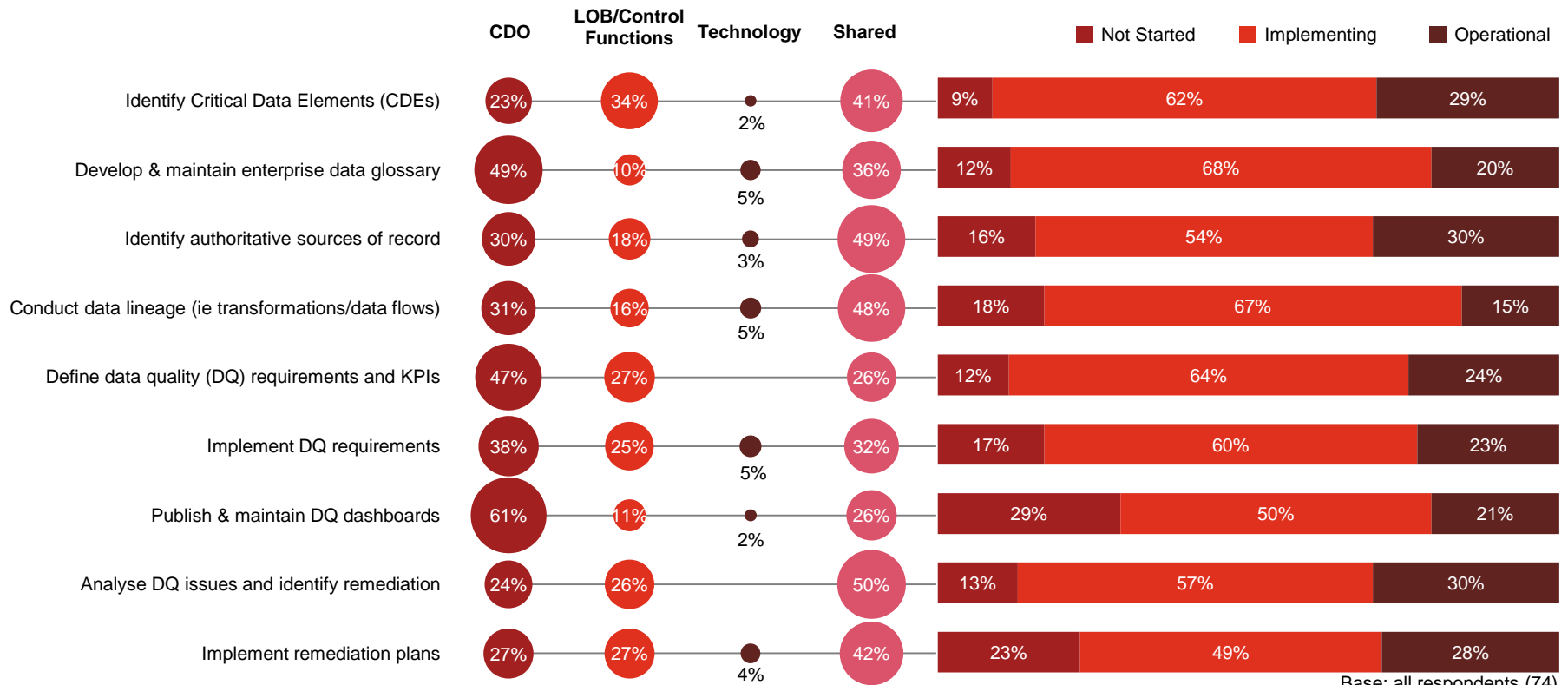
- Across the board the CDO is leading data governance efforts, and developing policy (84%), setting standards (77%) and defining roles and responsibilities (71%). We found that technology has a limited role around establishing data governance policy and strategy but is the most critical for implementation.
- In several areas responsibilities are shared with business and/or IT partners, notably: setting strategy, prioritising initiatives and setting direction and guiding the adoption of standards. We have observed in the market organisations that do not engage early with the business and IT tend to struggle setting up foundational data management capabilities. Engaging with partners in these three areas in particular will align interests and enable success.
- The fact that only 26% of respondents have an operational data strategy may be surprising when considered in isolation. However when viewed in the broader context of risk and regulatory imperatives driving creation and focus of the CDO, one can understand “catching up” on strategic data issues at this time.

#### 4. CDO remit and operational maturity

## 20% of respondents have an operational enterprise data glossary, 68% are in the process of implementing it

**Q15. Please identify responsibility for the following data management processes as well as your maturity.**

#### Data management processes



#### Key findings and insights

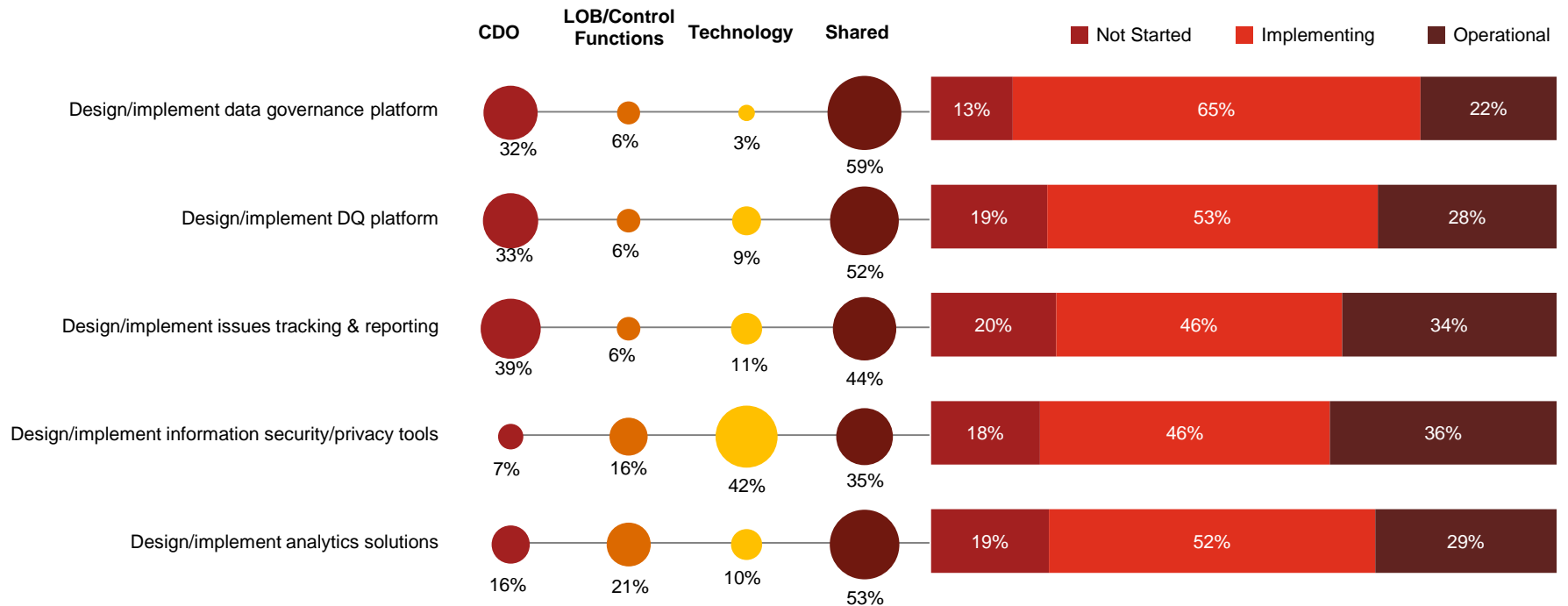
- Implementing data management is an ongoing industry effort; across the evaluated dimensions, none was noted as operational by more than 30% of respondents.
- Most respondents identified data quality activities as a largely joint responsibility between the CDO and LOB/Control functions, where the CDO plays a facilitating role, providing the tools and setting standards to detect, analyse, and remediate issues. This is encouraging as most CDOs we interviewed echoed a strong desire to shift accountability of data quality to owners of that data. The CDO has a slightly higher responsibility on functions that are relatively more enterprise in nature, such as enterprise data glossaries, publishing data quality dashboards, and defining KPIs.
- A number of CDOs are standing up data quality programs in waves based on priority (eg function or LOB, efforts to address specific regulatory requirements). An enterprise view, strong governance and controls are critical to maximise the value of investments in these programs.

## 4. CDO remit and operational maturity

# CDOs across the industry are still in the process of defining and implementing enabling data architectures

**Q16. Please identify responsibility for the data technology & architecture capabilities as well as your maturity.**

### Data technology & architecture



Base: all respondents (74)

### Key findings and insights

- IT departments understandably play a larger role with respect to data technology and architecture, with the survey results demonstrating shared ownership with CDOs. Data governance platforms and data quality tools are operational across less than 30% of respondents.
- Looking under these numbers shows that financial institutions in the Americas have more mature data technology and architecture capabilities compared to the rest of the world. 43% of Americas' respondents identified data technology and architecture capabilities as operational, compared to 17%, 15% across EMEA and APAC respectively.
- For those financial institutions impacted by the EU GDPR, we expect CDOs to become more involved in privacy and information security technologies, and how data governance tools can support privacy requirements.





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## ***5. Challenges and future priorities***

## 5. Challenges and future priorities

# Respondents noted complexity with data ownership and usage amongst the highest organisational challenges

**Q18-20. Please identify and rate key challenges facing the CDO office (or equivalent function).**

	Low	Medium	High
<b>Organisational challenges</b>			
Organisational complexity of data ownership/usage	3%	46%	49%
Too many other organisational priorities	8%	35%	50%
Internal culture is resistant to change	20%	43%	32%
Lack of ability to measure ROI	19%	41%	34%
Reactive approach to data management	23%	39%	31%
Lack of stakeholder engagement, buy-in, and adoption	22%	53%	20%
Insufficient funding	31%	30%	31%
Lack of enterprise awareness of CDO role or mandate	32%	42%	20%
Limited authority to enforce policy and drive change	31%	35%	26%
Perception that data management is a theoretical exercise	31%	35%	23%
Lack of top-down sponsorship or enforcement of data policies	43%	38%	11%
<b>Technical and architecture challenges</b>			
Disjointed and highly complex legacy systems/architecture	3%	20%	74%
Multiple/redundant data repositories	8%	35%	54%
Significant data quality issues	26%	43%	27%
Limited ability to ingest external data	42%	32%	11%
<b>Staffing and talent management challenges</b>			
Lack of resources with next-generation skills (eg Analytics & Big Data)	9%	31%	54%
Lack of resources with adequate business or technical skills	15%	46%	36%
Insufficient staffing	16%	55%	26%
Limited understanding of LOBs or Control Functions' requirements	27%	57%	11%
Insufficient project/program management capabilities	41%	39%	11%

Base: all respondents (74); excludes N/A responses

### Key findings and insights

- Looking under these numbers shows that insufficient funding for the CDO office was a higher challenge for respondents in APAC and EMEA than those in Americas.
- Many CDOs indicated lack of staff that possess sophisticated, next-generation data skills but also recognised growth in staffing these roles is constrained by funding and their organisation's speed of adoption.
- Many respondents noted an increased awareness of the CDO role at their organisations as well as top-down sponsorship and support.

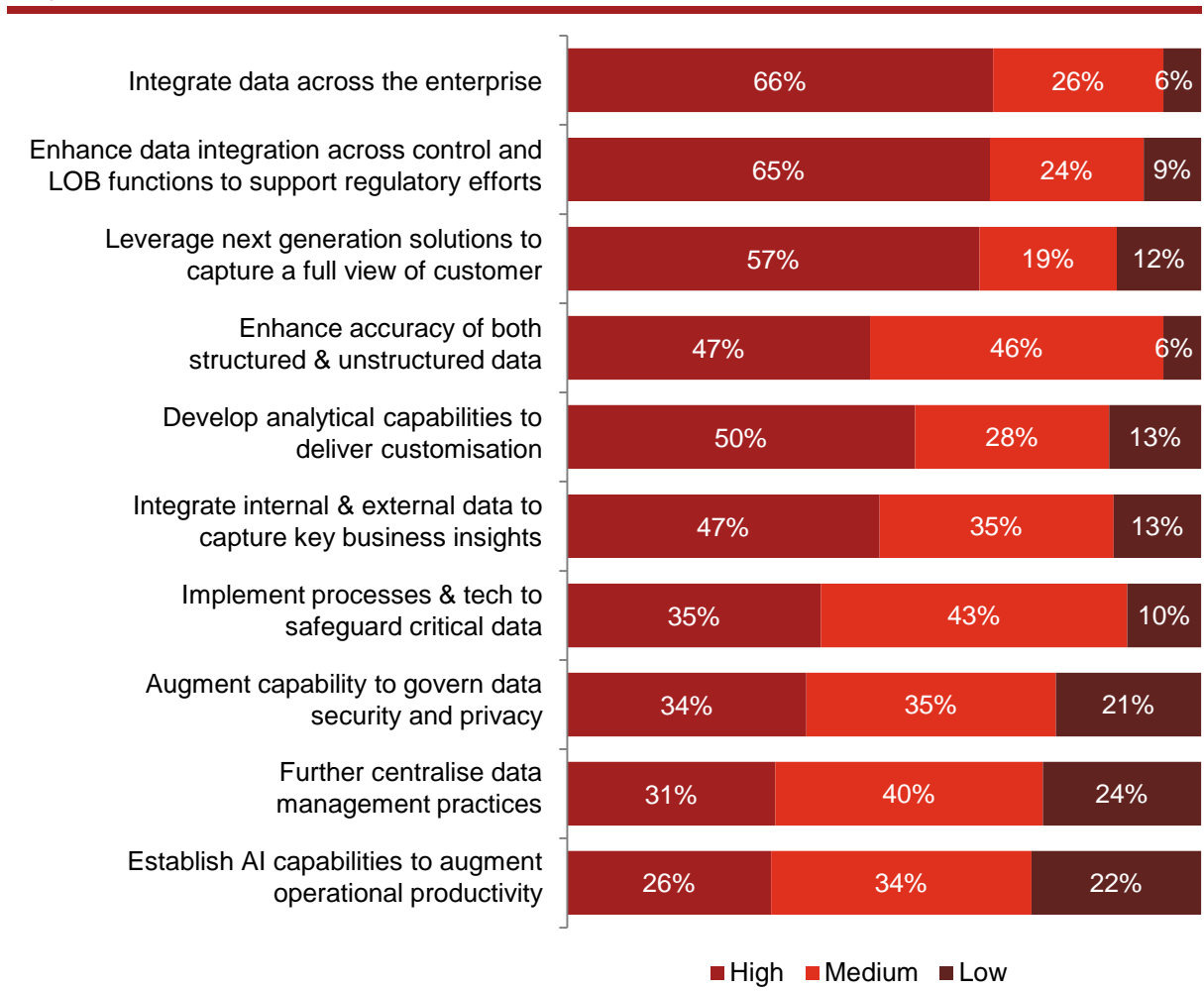
Additional commentary provided by respondents:

- Some respondents noted significant challenges that stemmed from organisational restructuring in their data and analytics function, leading to loss of productivity, high staff turnover, and further decentralisation of data management.
- A number of respondents cited organisational tensions with LOBs and control functions due to unrealistic expectations of the CDO's office and lack of business ownership of data issues.

# Integrating data across the enterprise is one of the highest CDO priorities in the coming years

Q22. What are the key priorities that the CDO (or equivalent) plans to pursue over the next few years?

## Key CDO priorities



## Key findings and insights

- CDOs are highly focused on integrating data across the enterprise to optimise reuse when meeting regulatory, business and customer needs.
- The shift to the digital economy is forcing CDOs to become more involved in advanced analytics, growth and customer-centric initiatives. 57% of respondents indicate that a primary priority is to leverage next generation solutions, such as advanced analytics, to enable a growth and customer-centric initiatives.

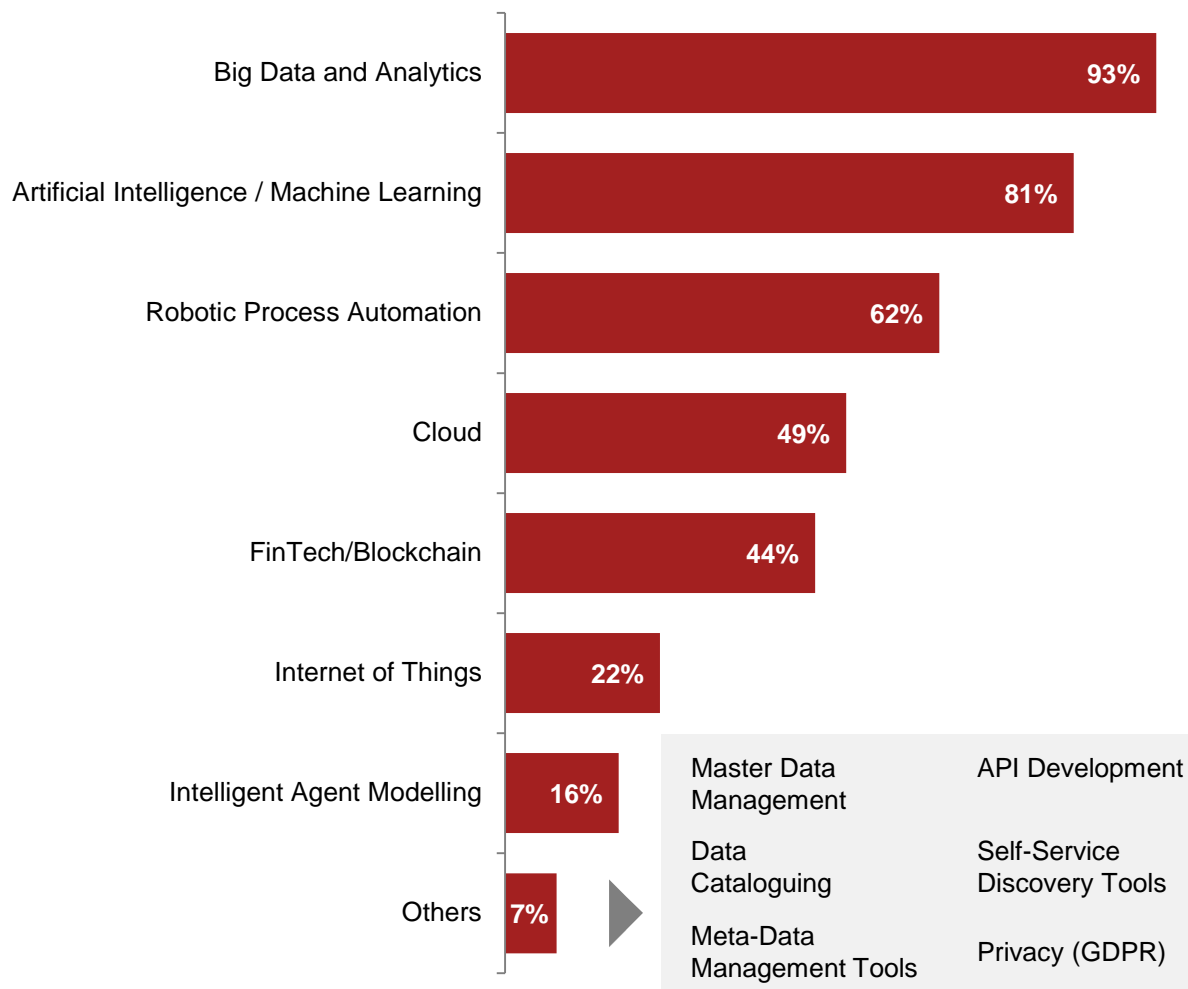
In looking at the detailed response data we found that:

- The CDO’s mandate largely influenced responses to this question. For those whose remit does not include big data and growth drivers, foundational data governance, such as ensuring data quality, is of higher priority.
- Many CDOs emphasised a continued focus on driving a cultural change in their organisations by embedding more “duty of care” over data quality and ownership.
- Respondents who rated growth drivers as high noted additional priority areas that include: modernising digital capabilities at their firms, providing self-service analytical capabilities to LOBs, and sponsoring or enabling big data tools to achieve monetisation.

Base: all respondents (74); excludes N/A responses

## Most respondents believe Big Data and AI will significantly transform how their organisations use and monetise data

**Q24. Which of the following technologies would you consider to be significantly transformative to how you govern and monetise data over the next few years?**



### Key findings and insights

- The ever-increasing proliferation of data collection and processing continues to fuel interest and investments in next-generation data technologies. CDO organisations across financial services are at varying degrees of maturity as it relates to building a case, creating proof of value, and adopting next generation data technologies.
- Our observation is that firms in the insurance and payments sectors have advanced use of big data and AI beyond the “conceptual” stage due to the volume of transactional data they amass. Many CDO respondents from these sectors indicated that a focus area now is to further embed analytics into their organisations, and empower less experienced data consumers with the tools to access insights and drive decisions.
- In selected areas such as marketing and fraud prevention, the use of big data and machine learning advanced significantly.
- Due to the decentralised nature of data analytics teams and platforms and various banks, a number of CDO respondents indicated that a key focus area is establishing governance and controls over analytical data environments while embracing the business’ desire to innovate.
- The general decentralisation of analytics functions highlights a business case for the CDO to more closely align with these functions and make sure there is consistency in how data and analytical tools are used across the enterprise.

Base: all respondents (74), multiple responses allowed



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## *Appendix*

## Additional survey data – Manifestations of CDO by sector

**Q3. Recognising there is no one-size-fits-all model for the CDO, of the three models below, which is closest to your organisation's?**

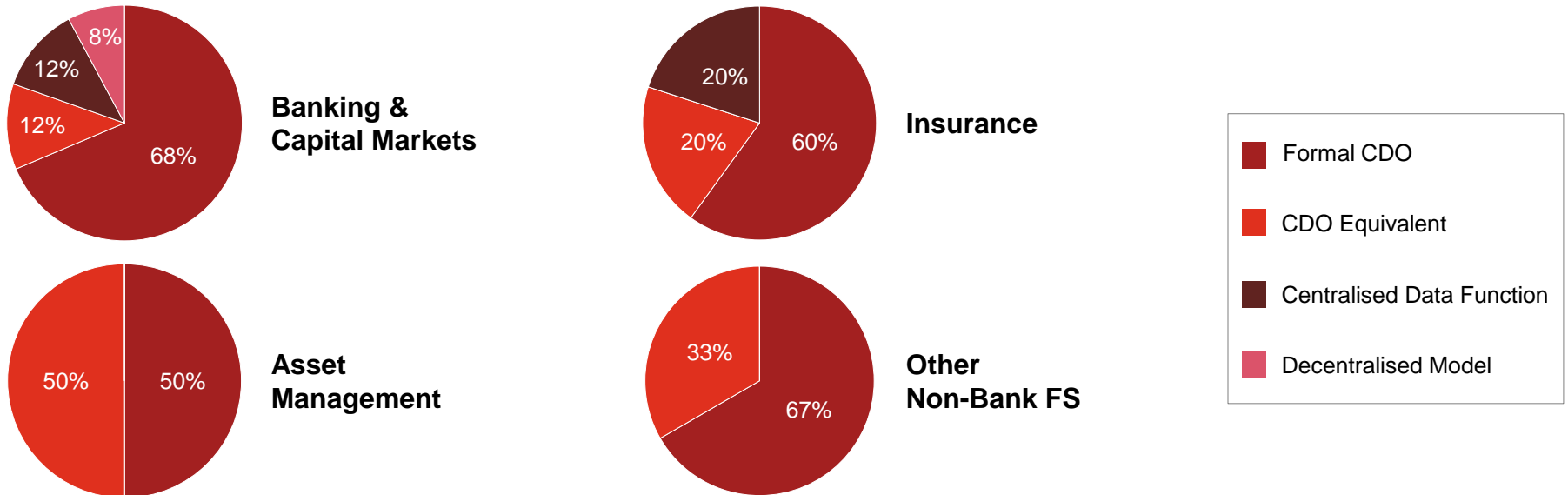
**Q4. Please select best option that applies to the CDO role (or equivalent role/function).**

### Manifestation of the “CDO role” – Total



Base: responding financial services firms (64)

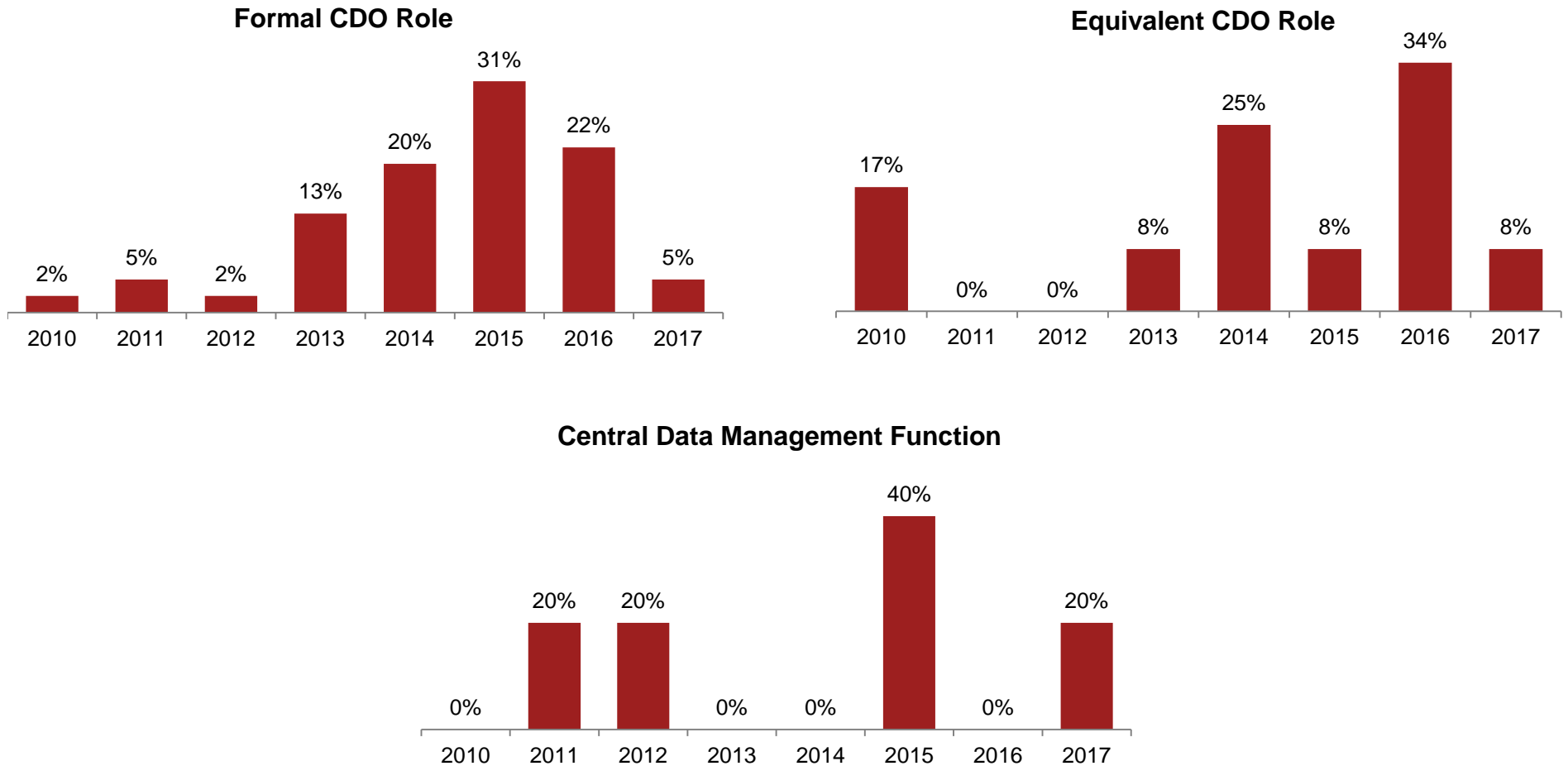
### Manifestation of the “CDO role” by sector



## Additional survey data – Year established

### Q5. When was the CDO role or equivalent role/function established?

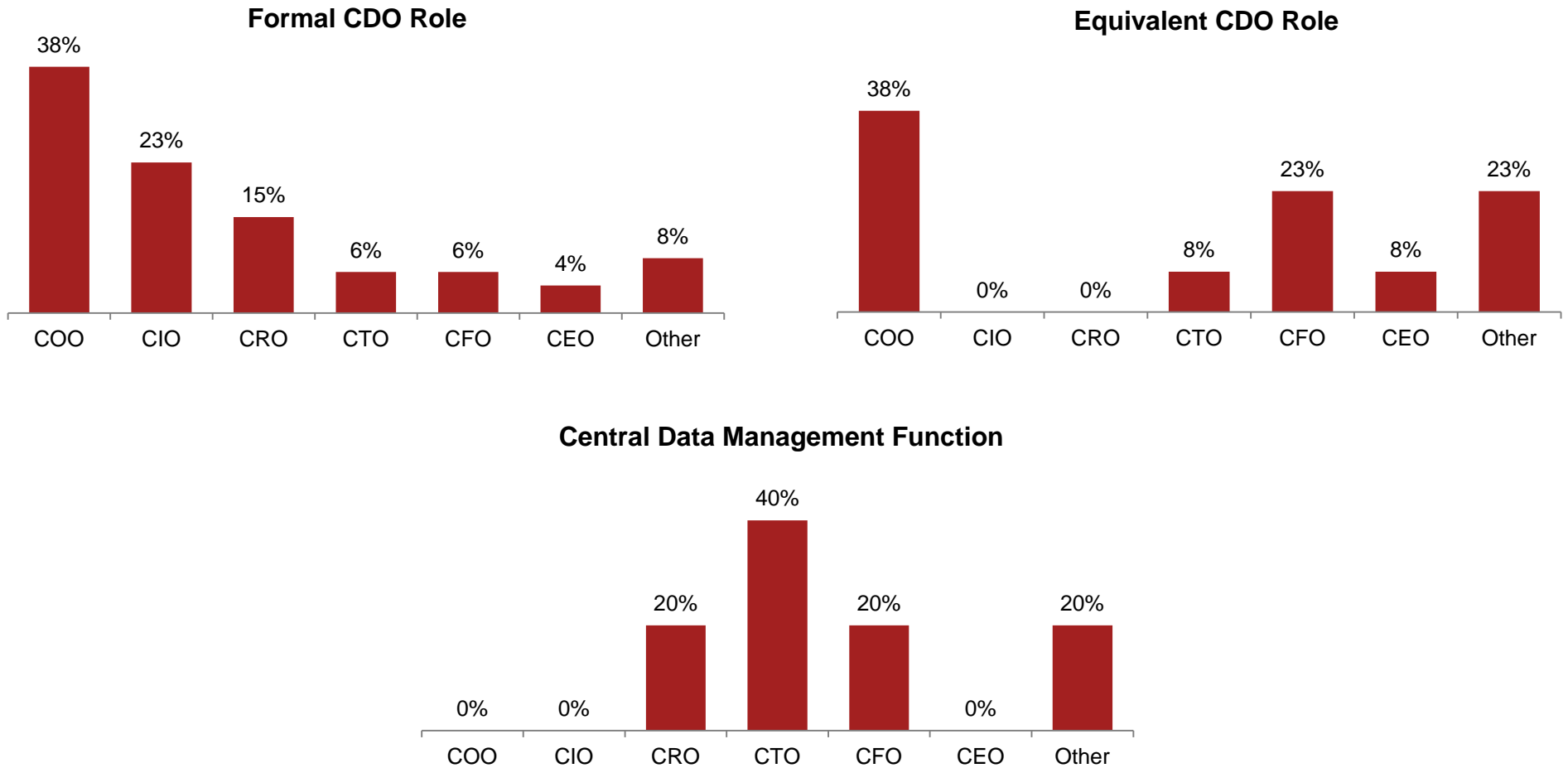
#### Manifestation of the “CDO role” – Year established



## Additional survey data – Reporting lines

Q6. To whom does the CDO (or equivalent role/function) report?

*All functions reporting line*





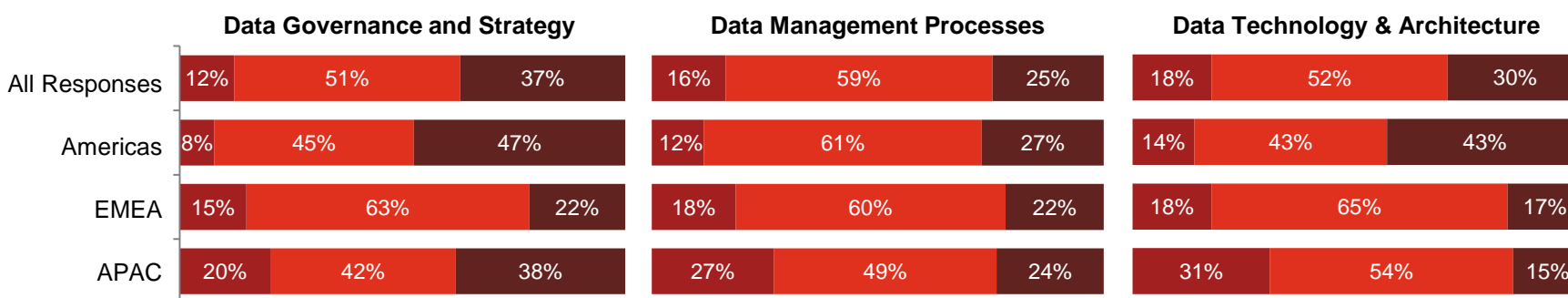
## Additional survey data – Maturity by geography and sector

**Q14. Please identify responsibility for the following data governance and strategy capabilities as well as your maturity**

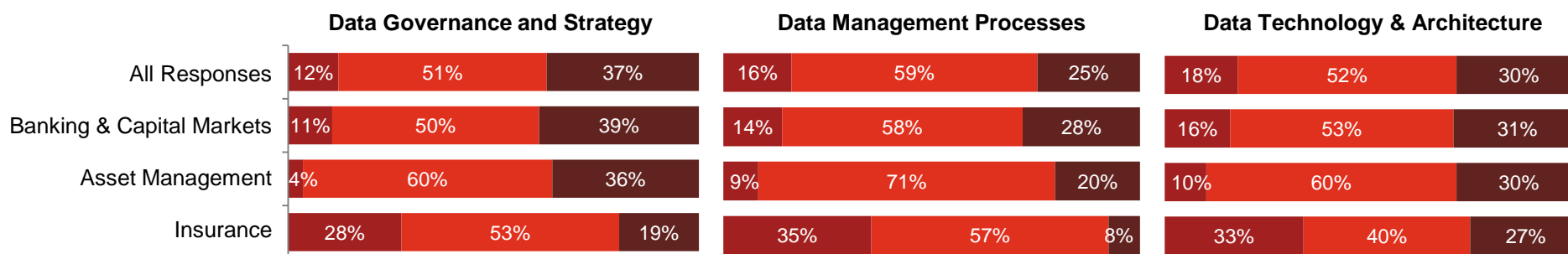
**Q15. Please identify responsibility for the following data management processes as well as your maturity.**

**Q16. Please identify responsibility for the data technology & architecture capabilities as well as your maturity.**

### Maturity by geography



### Maturity by sector



■ Not Started ■ Implementing ■ Operational

Base: all respondents (74); excludes N/A responses

# Your PwC Australia data governance leaders

*If you have any questions regarding the survey or would like to have a deeper, more focused conversation about how this subject may affect your organisation, please contact:*



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*On behalf of PwC, the survey team would like to thank those organisations that participated in this important survey. We trust you find value in the analysis and insights.*

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