The future of reserving

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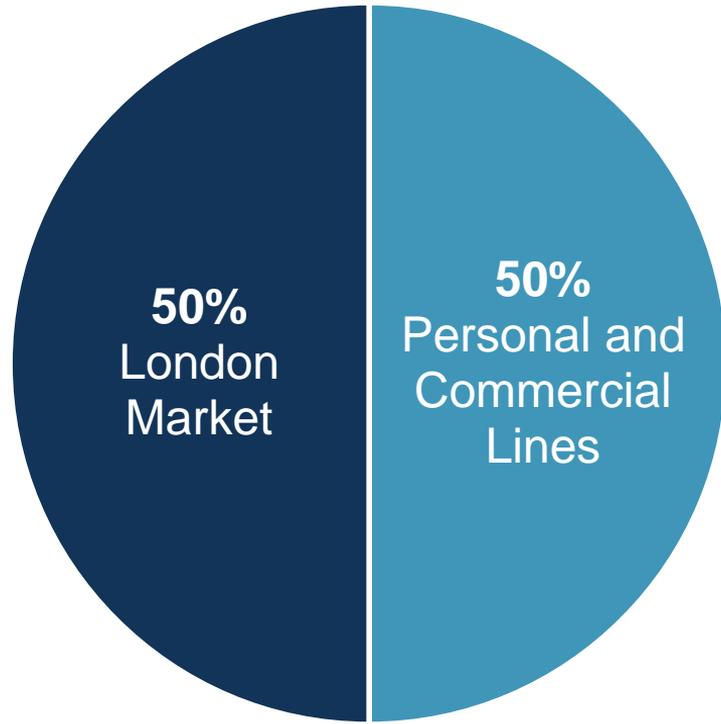
Agenda

- Future of reserving market review

  1. Firms' top reserving objectives

  2. The ideal reserving process

  3. Key barriers to change

  4. Priorities for 2020

- Setting your "levelling-up" path

- Case study: Earlier identification of trends

About the future of reserving market review

50%
London
Market

50%
Personal and
Commercial
Lines

Interviewed over 80 people across 36 insurers to discuss:

- The reserving status quo

- The ideal

- Barriers to change

Included interviews with Chief Actuaries, CFOs, CROs, Heads of Reserving and reserving practitioners

1. Firms' top reserving objectives

We asked which of the following are top priority and which firms could (at a push) live without.

Earlier identification of trends	Avoiding reserving surprises	More time for value added analysis
Quicker results	What are your objectives?	Reduce expenses
Reduce mundane work	Improve management information	Better understanding of reserves

1. Firms' top reserving objectives

We asked which of the following are top priority and which firms could (at a push) live without.

|		
Earlier identification of trends **69%**	Avoiding reserving surprises	More time for value added analysis **53%**
Quicker results	What are your objectives?	Reduce expenses
Reduce mundane work	Improve management information **58%**	Better understanding of reserves

1. Firms' top reserving objectives

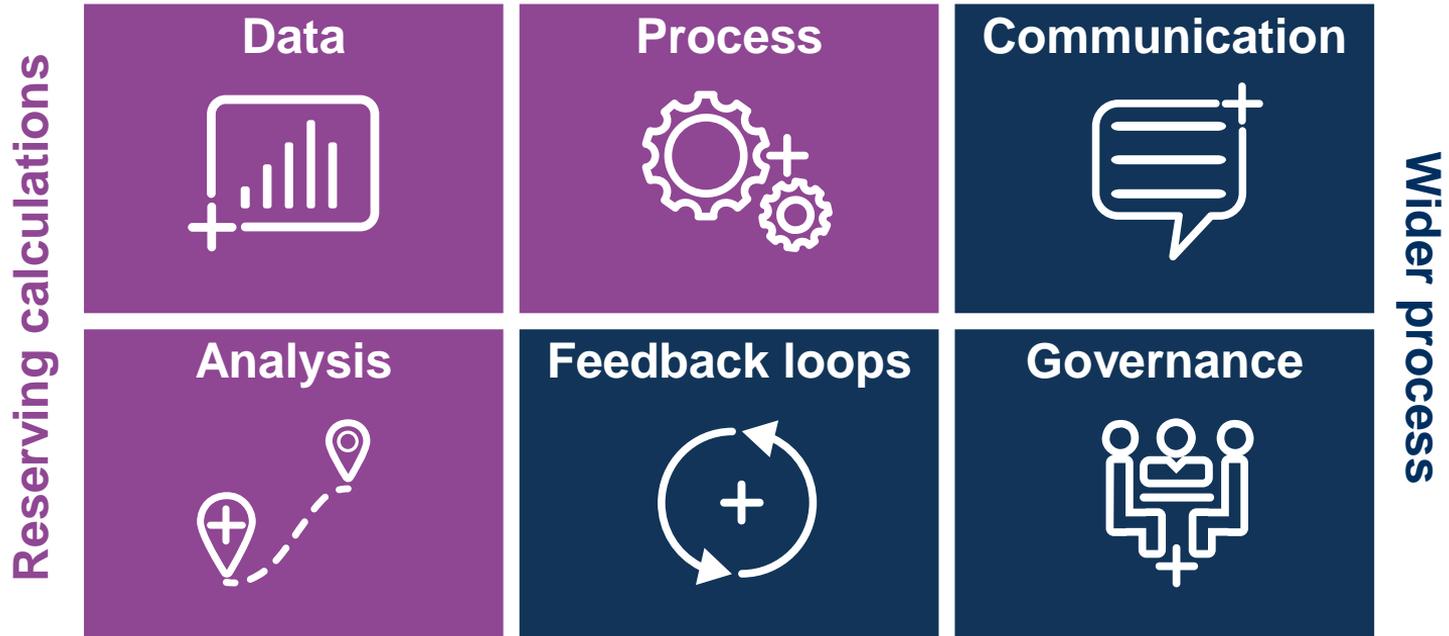We asked which of the following are top priority and which firms could (at a push) live without.

Earlier identification of trends **69%**	Avoiding reserving surprises	More time for value added analysis **53%**
Quicker results **50%**	What are your objectives?	Reduce expenses **81%**
Reduce mundane work **67%**	Improve management information **58%**	Better understanding of reserves
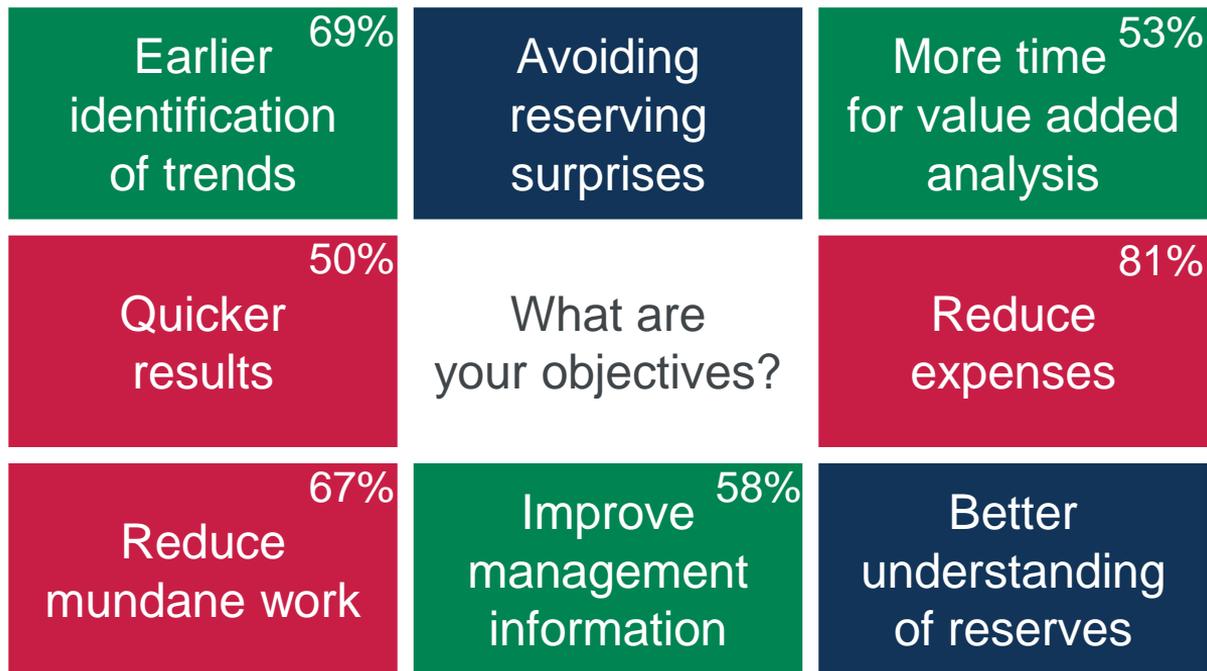
2. The ideal reserving process

We asked firms to describe their ideal reserving process covering six main areas.

Reserving calculations

Wider process

Data	Process	Communication
Analysis	**Feedback loops**	**Governance**

2. The ideal reserving process

Reserving calculations:

Data	Process	Analysis

Data

- Single reliable source
- Ability to "drill down" or "slice and dice"
- Enriched with external data

Process

- Automation to give focus on value add
- Faster process, but few targeting "real time"
- Early warning flags for trends and anomalies

Analysis

- Majority satisfied with traditional methods
- Easier sensitivity testing and what-if scenarios
- Ability to drill down (into results as well as data)

2. The ideal reserving process

Wider reserving process:

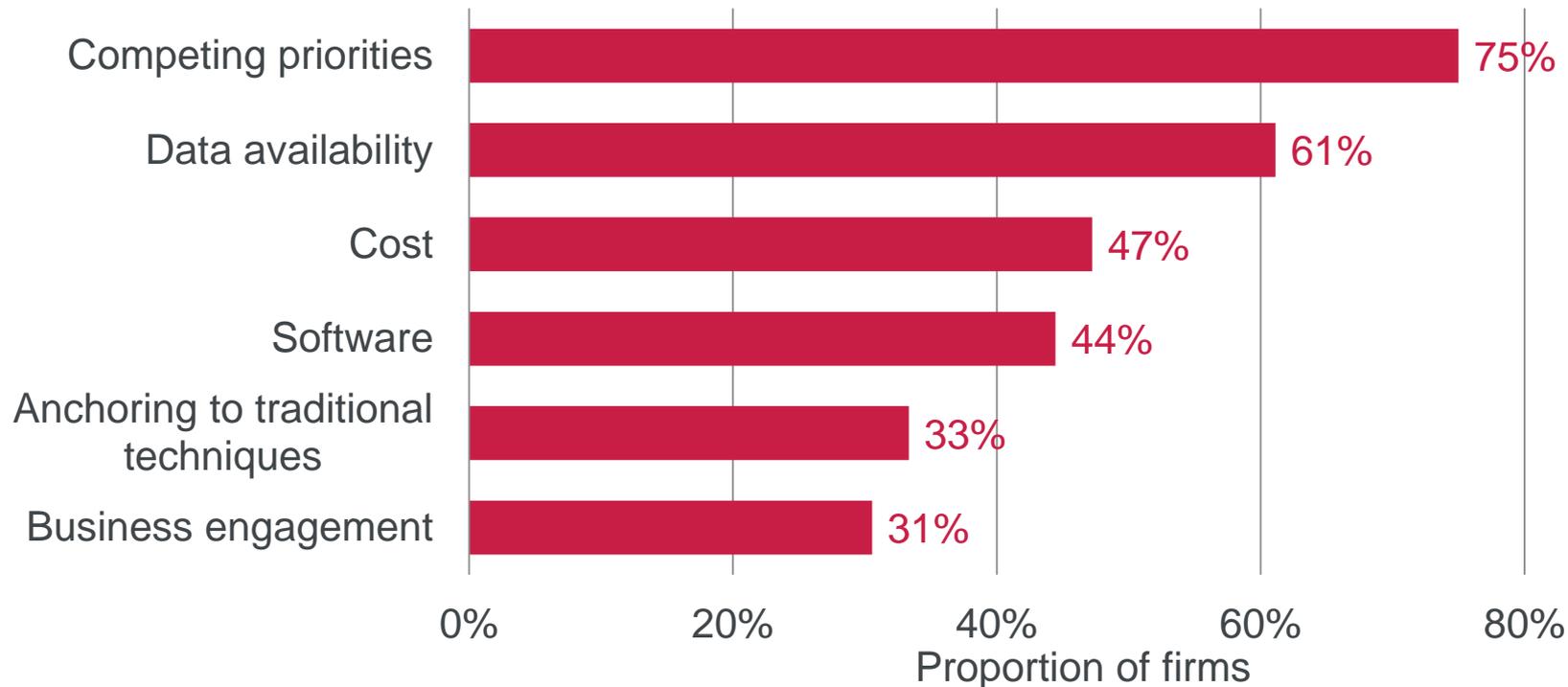| **Communication**	**Feedback loops**	**Governance**
• Increased focus on story behind the numbers	• Quicker identification of drivers of performance	• Most firms satisfied governance working well
• Use of scenarios to explain uncertainty	• Reserving linking to other business functions, incl. pricing, claims, strategy and risk	• Majority of challenge by sub-committees
• Some firms targeting a reserving dashboard		• Board focus is then on what numbers mean

2. The ideal reserving process

Avoiding some of the potential pitfalls of automation:

Potential benefit	Potential pitfall	Ways to manage this
Real time results	Overly focused on short term	Retain quarterly reserving cycle
Instant output from automated process	Overconfidence in results	Ongoing training of algorithms (and the team)
Reduction in manual processing	Junior team de-skilled	Keep maximum 80% automated and 20% manual
Ability to drill into reserving dashboard	End user misusing the results	Manage who has access to each level of detail

3. Key barriers to change

We asked firms what the key barriers to change are in their reserving process.

Barrier	Proportion of firms
Competing priorities	75%
Data availability	61%
Cost	47%
Software	44%
Anchoring to traditional techniques	33%
Business engagement	31%

Proportion of firms

4. Priorities for 2020

We asked firms' about their priorities for the coming year.

Top priorities

- Good data quality
- Identifying emerging trends
- Communicating uncertainty
- Robustness of reinsurance estimates

Other high priorities

- Overall efficiency of processes
- Real insight from actual vs expected analysis
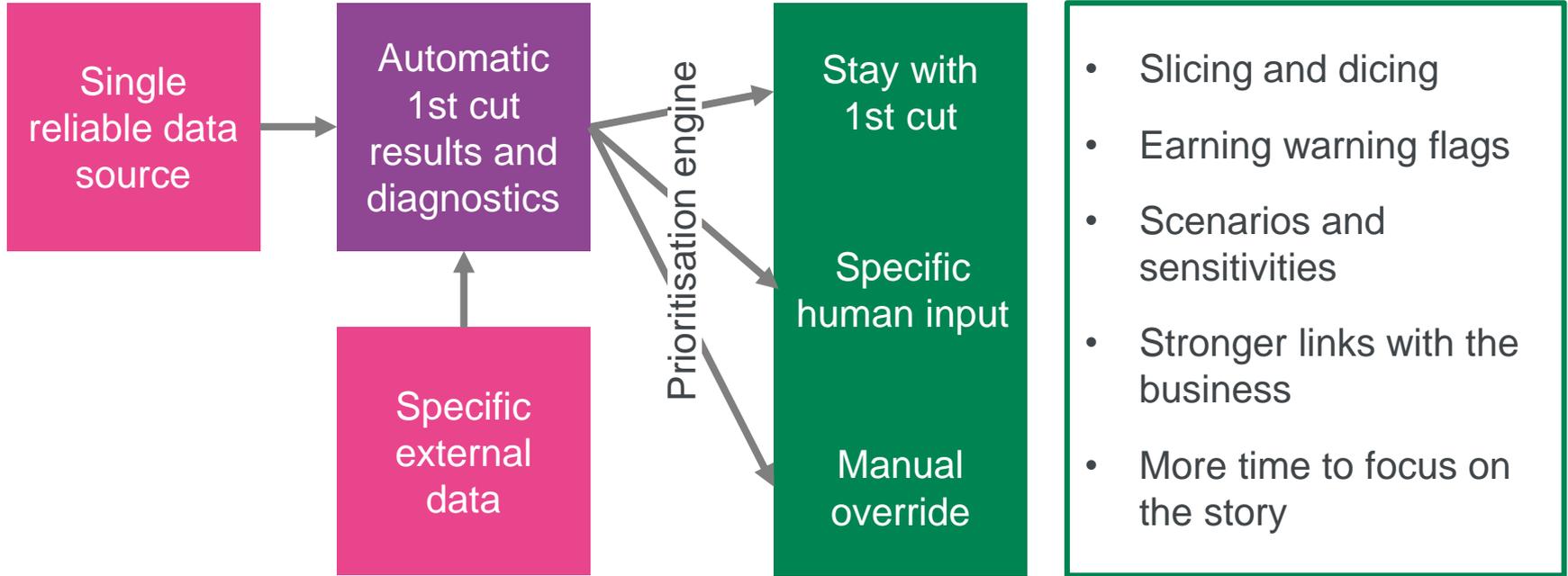- Effective coordination of reserves (TPs, GAAP, IFRS17 etc.)
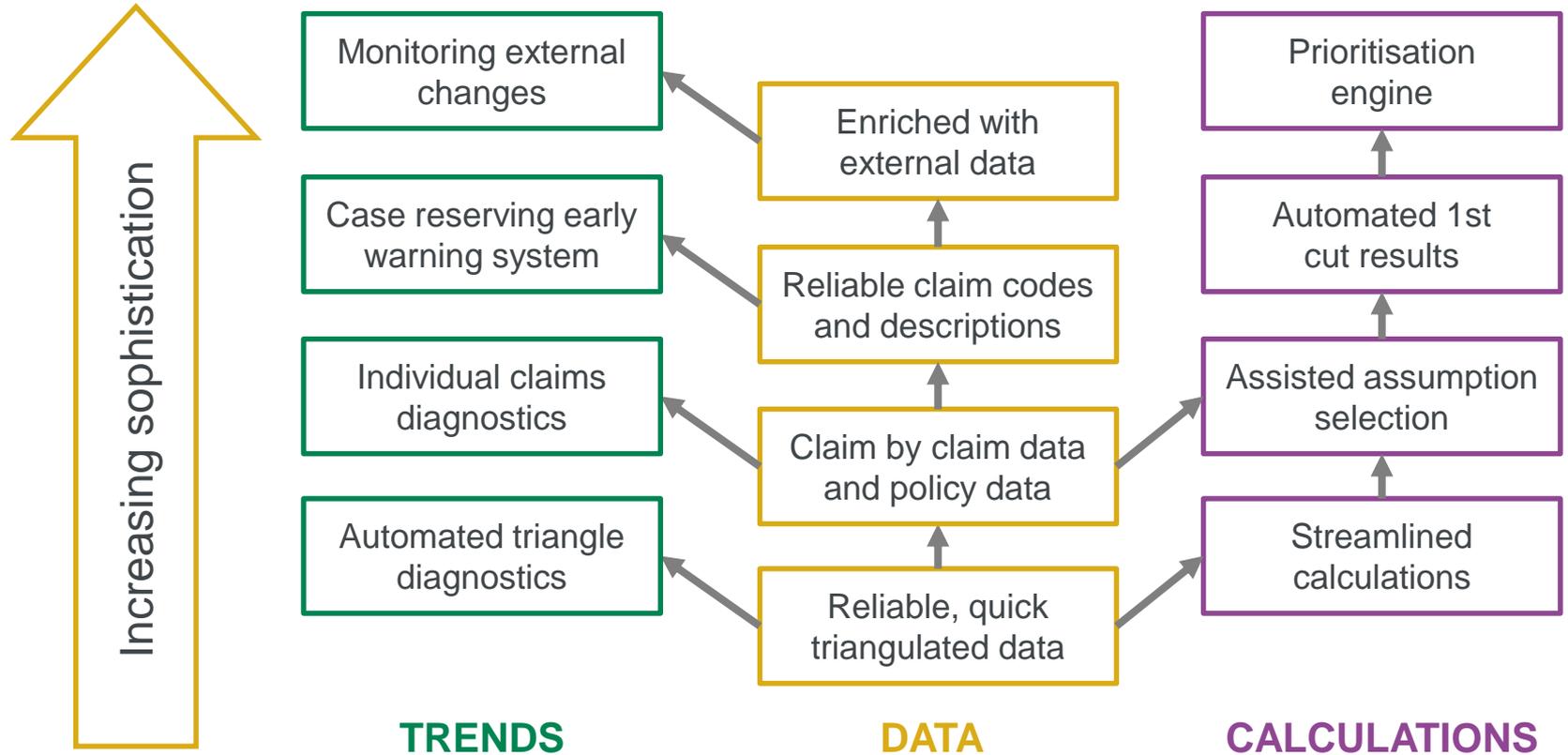
Satisfied with status quo

- Quality of external input
- Pre-empting challenge
- Ease of incorporating new classes of business
- Quality of interaction with claims, pricing and underwriting teams

The future of reserving

Bringing everything together, what could the future of reserving look like?

```
┌─────────────┐     ┌─────────────┐                    Stay with
│ Single      │ ──→ │ Automatic   │ ──────────────→    1st cut
│ reliable    │     │ 1st cut     │
│ data source │     │ results and │ ──────────────→    Specific
└─────────────┘     │ diagnostics │                    human input
                    └─────────────┘
                          ↑          ──────────────→    Manual
                    ┌─────────────┐                     override
                    │ Specific    │
                    │ external    │
                    │ data        │
                    └─────────────┘
```

Prioritisation engine

- Slicing and dicing

- Earning warning flags

- Scenarios and sensitivities

- Stronger links with the business

- More time to focus on the story

Setting your "levelling-up" path for reserving

Increasing sophistication →

| Monitoring external changes |
| Case reserving early warning system |
| Individual claims diagnostics |
| Automated triangle diagnostics |

| Enriched with external data |
| Reliable claim codes and descriptions |
| Claim by claim data and policy data |
| Reliable, quick triangulated data |

| Prioritisation engine |
| Automated 1st cut results |
| Assisted assumption selection |
| Streamlined calculations |

TRENDS   **DATA**   **CALCULATIONS**

Case study: Earlier identification of trends

Traditional

- Manual review of triangles

- Time consuming (ie, hours) to review all triangles, so typically consider a selected sample

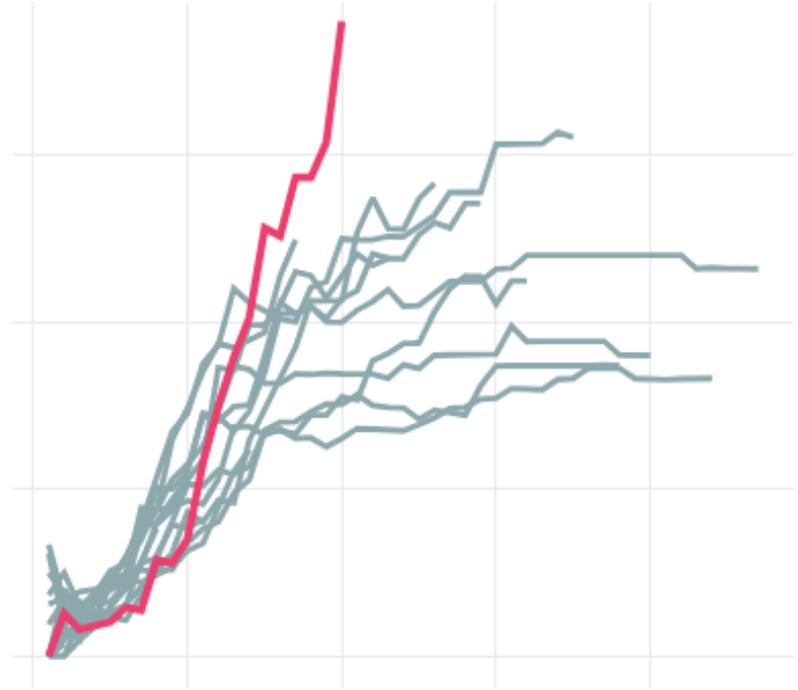- Potential to miss features

Enhanced

- Automated approach, which prioritises top triangles to review

- Quick (ie, minutes), scalable and ability to drill down

- More time to understand the "why?"
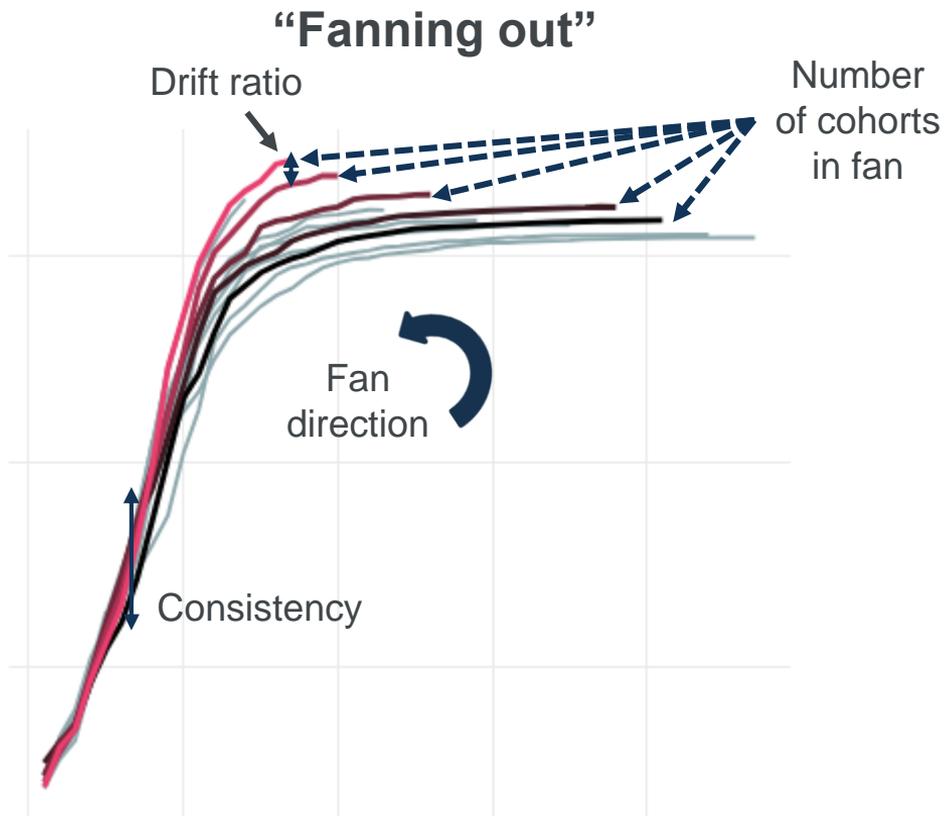
What are we looking for?
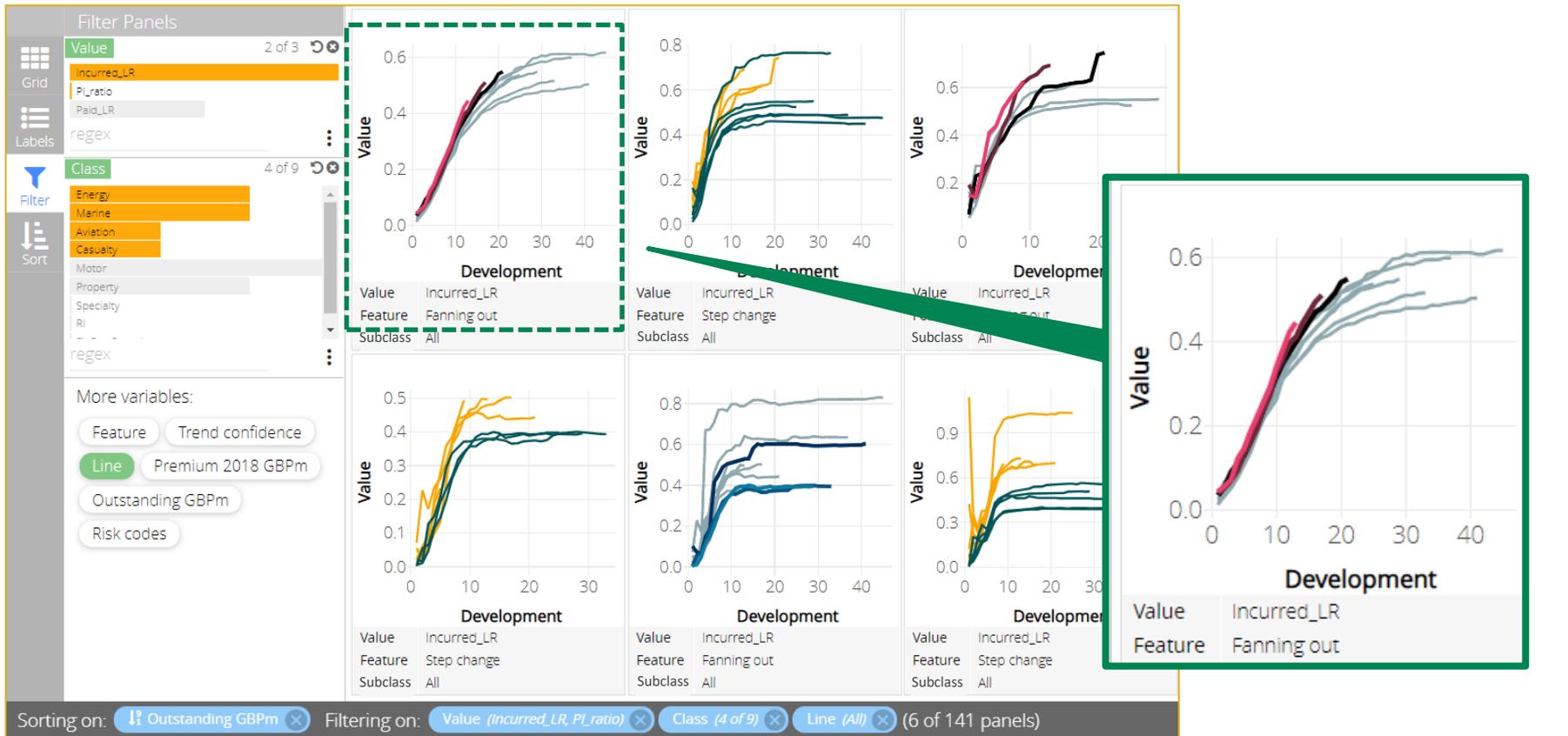
"Fanning out"
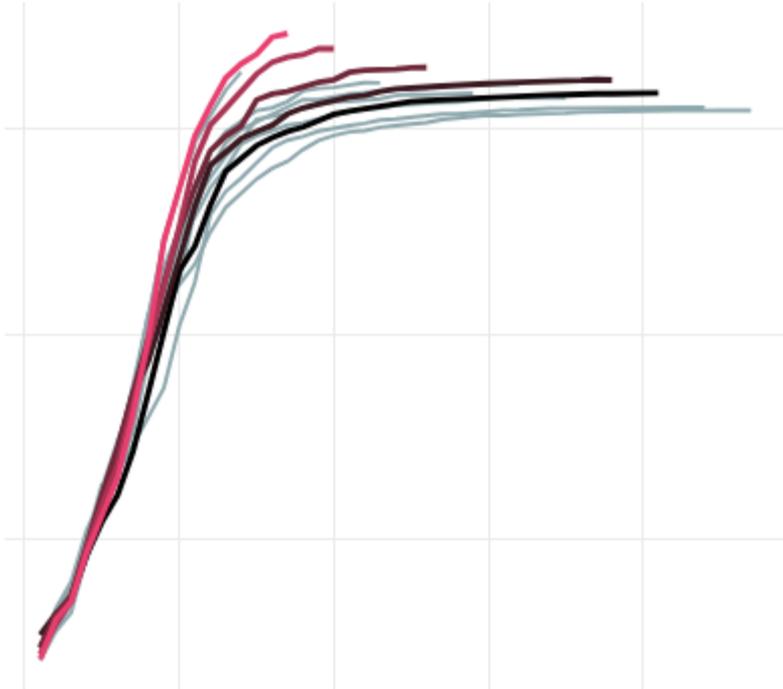
"Sticking out"

What are we looking for?

"Fanning out"

Drift ratio

Number of cohorts in fan
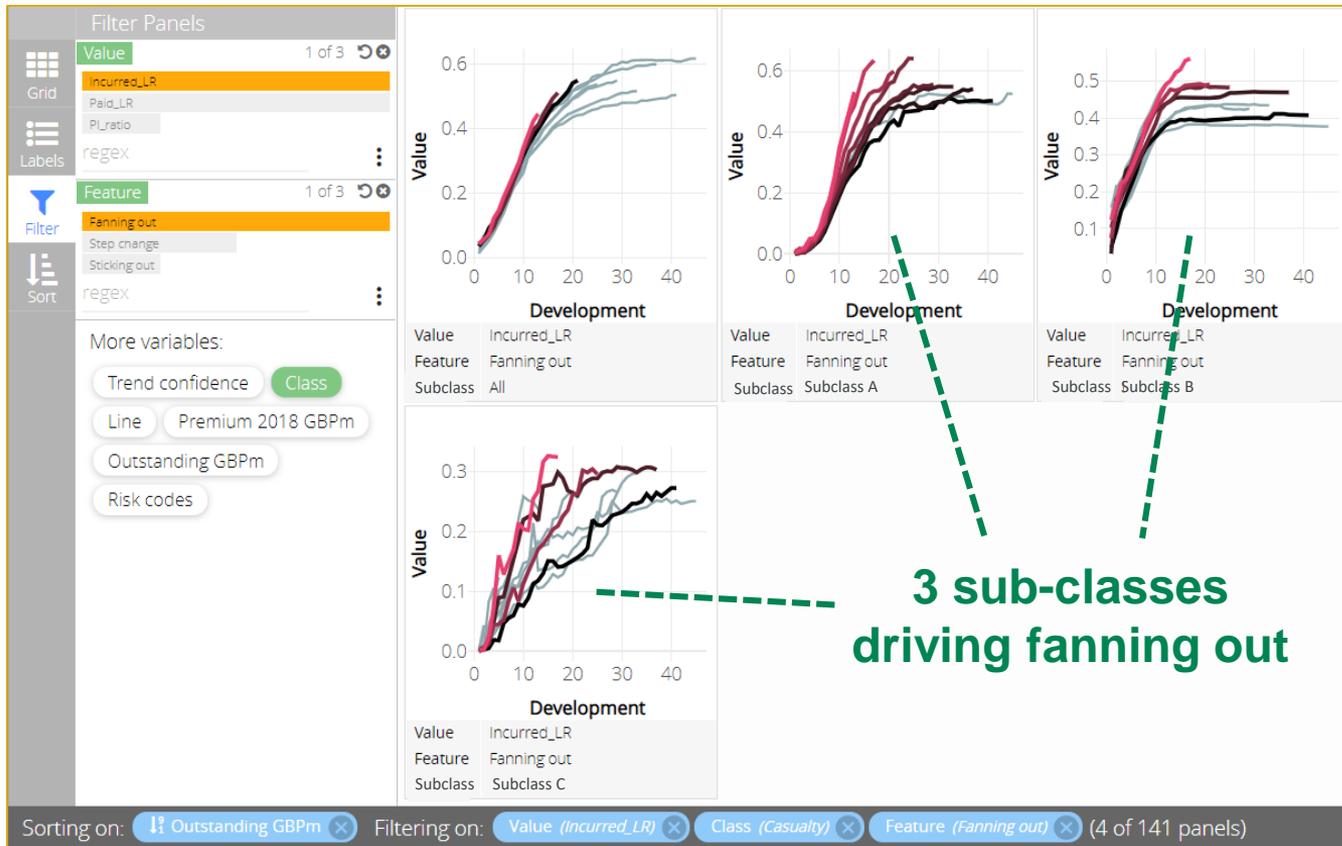
Fan direction

Consistency

Feature engineering:

Using domain <u>knowledge of the data to create features</u> that make machine learning algorithms work

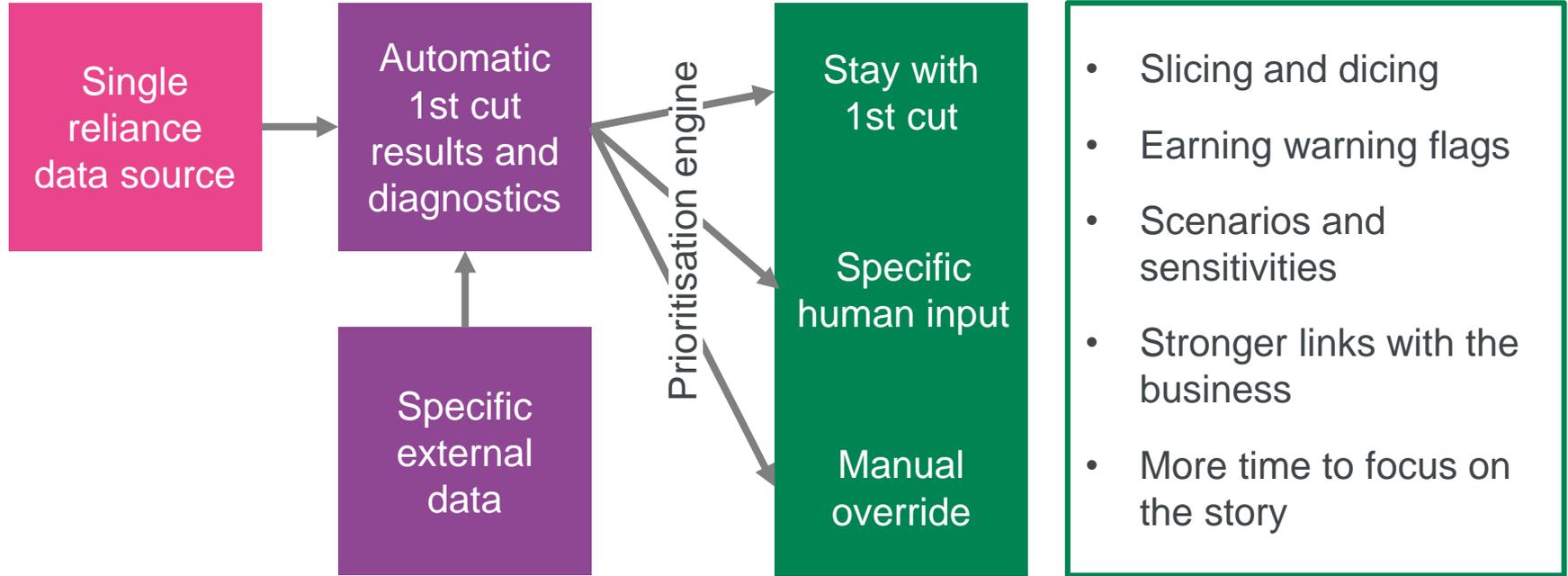# Using dashboard to review whole account

Drilling down into sub-classes

3 sub-classes driving fanning out

Key questions:

- Do ULRs increase towards recent years as the trend would suggest?

- Do business plan IEULRs for these sub-classes sufficiently allow for the trend?

Any questions?

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Single
reliance
data source
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→
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Automatic
1st cut
results and
diagnostics
```

```
Specific
external
data
```

Prioritisation engine

```
Stay with
1st cut
```

```
Specific
human input
```

```
Manual
override
```

- Slicing and dicing
- Earning warning flags
- Scenarios and sensitivities
- Stronger links with the business
- More time to focus on the story

Any questions?

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Questions

Comments

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