Report on the Cash Flow Testing Software Web Survey

Prepared for the Society of Actuaries

by

STATLAB
The University *of* Western Ontario

Dr. Ying Zhang
Pingguo Lu
Dr. Bruce Jones

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Gang Ma, Chair
Douglas George
Stephen Hodges
Donald Sanning
Michael Smith
Steven Siegel, SOA Research Actuary
Angela Bonnett, SOA Research Assistant

Executive Summary

This survey on Cash Flow Testing (CFT) software was distributed on May 17, 2004 and ended on June 18, 2004 with the goal of producing a report that will serve as a reference for comparing the available CFT packages and lead to better software and modeling techniques. A brief summary of the survey results is shown below. Confidence intervals that appear in the results have been calculated at a 95% level are based on the number of respondents to a particular survey question.

- The most frequently used CFT packages are:
  TAS, PTS, MG ALFA, AXIS, MoSes, BondEdge.
- 27.8% ± 7.61% respondents worked for companies with admitted assets greater than 10 billion, 27.1% ± 7.55% for companies with admitted assets between 2 and 10 billion, and 42.1% ± 8.39% for companies with admitted assets less than 2 billion.
- 78.3% ± 7.11% CFT software users have utilized the packages for more than 3 years.
- The reasons for stopping use of some other CFT packages mostly are "software features and (or) functionality could no longer meet needs" and "software was difficult to customize or work with".
- CFT packages are frequently used for life products and annuity products.
- Most CFT packages are frequently applied in bonds and mortgage related assets.
- Besides CFT, the software packages are mainly used for the purpose of new product pricing, inforce profitability, and earnings projection.
- Overall the most useful features are: open code (ability to change source code), ability to import data from a variety of other applications (e.g. spreadsheets, text files), ability to export results to Excel or other spreadsheet applications.
- 45.3% ± 8.28% of the respondents need third party software like Excel, APL, or BondEdge.
- Telephone support, help screens, email responses to questions are the main supports provided.
- Overall, 57% ± 8.68% respondents need more than 2 weeks training on the original CFT software packages.
- Most users need only less than half a week training on a typical update/new release before becoming knowledgeable.
- Overall more than half of the respondents are satisfied with the vendor's future plan.
- Overall, areas that vendors need to improve are: features, functionality and flexibility of packages; processing speed; coverage of assets.

Introduction

Cash Flow Testing (CFT) refers to analysis, which is used to support the Asset Adequacy Analysis behind the Actuarial Opinion for U.S. companies, and analysis, which is used to determine the ALM Provision for Adverse Deviations in applying the Canadian Asset Liability Method to determine reserves for Canadian companies.

CFT is an important responsibility of actuaries in the insurance industry. Actuaries are routinely called upon to utilize CFT to determine reserve adequacy, evaluate investment strategies, and project future profitability as well as a variety of other purposes. Periods of economic change coupled with recent national attention on corporate solvency ensure a continually growing need for this function. Additionally, potential changes in regulations governing actuarial opinions could significantly expand the number of companies using cash flow testing to satisfy opinion requirements.

For actuaries to make well-informed choices on suitable software packages for CFT, they need comparative data. Currently, there is a shortage of information readily available in order to make intelligent software purchase decisions.

At the same time, an increasing number of vendors have responded to the need for efficient applications of CFT and have created specially designed modules within their software packages. The appeal of such software packages is easily apparent to the practicing actuary. Consistent with the increasing trend of usage of CFT, it is anticipated that more and more vendors will enter this market.

In response, a survey of CFT software package users was conducted. The goal of this survey was to produce a report that will serve as a reference for comparing the available software packages. In addition, it is hoped that production of such a report will, in turn, lead to better software and modeling techniques.

Survey Design and Implementation

Between January 2003 and May 2004, the survey questionnaire was produced, and a website was created to facilitate completion of the questionnaire. The Society of Actuaries provided a list of 378 companies that use Cash Flow Testing software in Canada and the United States. The survey officially started on May 17, 2004, when the first introduction letter was emailed by the SOA, and the first contact letter was emailed by Statlab. The companies were asked to provide names of CFT software users who were willing to complete the questionnaire. Statlab sent reminders to non-respondents on May 26th 2004. On June 9th a letter was sent to extend the deadline to June 18th, on which the survey officially closed.

Response

As indicated above, 378 companies were contacted. As of the deadline, 110 companies with 128 CFT users participated in the survey. Thirty-four companies responded that they were not eligible for the survey. The response rate was 38%.

The respondents of this survey can be:

- Multiple users of a particular Cash Flow Testing software package within a company
- An individual user or consultant currently using one or more than one Cash Flow Testing software package
- Individual consultants using a particular software package for more than one company

Among the 110 companies, 101 companies had 1 respondent; 6 companies had 2 respondents; the remaining 3 companies had 3, 4 and 8 respondents, respectively. Among the 128 individual respondents, 109 respondents employed 1 package; 15 respondents utilized 2 packages; 4 respondents used 3 packages.

The following results count respondents based on the number of packages for which they provided information, rather than the number of users who responded. In other words, an individual user may be counted more than once if multiple packages were selected.

Summary of Results

The following four subsections give a summary of the survey results. Detailed results for each survey question are presented in the graphs and tables in the appendix.

1. Customer Background Information

Approximately 96% of respondents were from insurance companies. Sixty-two respondents (or 46.6%) were appointed actuaries for their companies. Only 2 respondents were directly affiliated with the CFT software vendors, and they were excluded from the analysis.

The CFT packages used by respondents are: TAS (58 respondents), PTS (22), MG ALFA (19), AXIS (8), MoSes (7), BondEdge (5), AVE(4), Prophet(2), Rimcon(2), ARCVAL(1), Bambrough (1), PolySys(1), Rex(1), Yieldbook(1), and software systems developed in house (6). BondEdge, AVE, Rimcon, ARCVAL, Bambrough, PolySys, Rex, Yieldbook were not listed in the survey question and were inputted by the respondents. Brief introductions to these packages are given after question 4 in the appendix. In the results provided in the appendix, packages used by fewer than 5 respondents are included in the "other" group.

The survey results indicate that 52.3% of respondents applied CFT packages for only one company, 19.7% for two companies and 18.9% for 3 companies.
Overall, 42.1% of the respondents worked for companies with admitted assets less than $2 billion, 27.8% for companies with admitted assets greater than or equal to $10 billion and another 27.1% for companies with assets between $2 and $10 billion. These percentages are significantly different for appointed actuaries and non-appointed actuaries.

A large proportion (78.3%) of respondents had used CFT software for more than three years.

Twenty-nine out of 133 respondents were using other CFT software in the past, but had switched packages for one or more reasons. Among them, 12 had switched to TAS, and 9 to MG. Most of the users attributed that change to software features and their functionality, while some referred to poor customization and poor customer service.

CFT packages were used for various kinds of products. Overall, 82% of respondents applied CFT software to life products, 71.9% to annuity products, 28.1% to health products, 15.1% to pension products.

Among assets such as bonds, collateralized mortgage obligations, derivatives, equities, hedge funds, etc., CFT is employed the most for bonds and mortgages, indicated by 69.9% and 45.9% of respondents, respectively.

In addition to CFT, the software packages are mainly used for the purpose of new product pricing, inforce profitability, and earnings projection. TAS, PTS, and MG ALFA are used for almost all categories.

2. Cash Flow Testing Software Features

Overall the most useful features are open code (ability to change source code), ability to import data from a variety of other applications (e.g. spreadsheets, text files, etc.), and ability to export results to Excel or other spreadsheet applications.

Many respondents (45.3%) indicated that they need third party software such as Excel, APL, or BondEdge. Excel is the most common.

3. Training

The main types of support provided were telephone support, which was used by 71.2% of respondents, help screens, which were used by 66.2% of respondents, and email responses to questions, which were provided to 61.9% of respondents.

Overall, 57% of respondents needed more than 2 weeks training on the original CFT software packages. Most users need less than half a week of training on a typical update/new release before becoming knowledgeable.

4. Satisfaction with Software and Vendor

Respondents were asked to rate the performance of CFT packages using a 5-point scale. For this scale, 1 means very dissatisfied, 3 means neutral, 5 means very satisfied.

The following table shows the frequency of overall satisfaction and user friendliness ratings.

Frequency: (Blank cells have 0 respondents)

Packages	Overall Satisfaction					User Friendliness				
	1	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
AXIS				4	3			2	3	2
BondEdge			1	3	1			2	2	1
MG ALFA			4	8	2		2	3	8	4
MoSes			1	2	1			1	3	
PTS	2	4	9	2	1	2	3	10	3	2
TAS		3	19	24	4	1	4	18	23	6
In house				4			1		3	1
Other			11	26	11		4	14	26	10

The frequencies of rating other features are given in question 19 of the appendix.

The mean satisfaction scores for some features of the more frequently used packages are:

Features	**MG**	**PTS**	**TAS**
Overall satisfaction	3.9	2.8	3.6
Ease of customizing	4.1	2.6	2.4
User friendliness	3.8	3.0	3.6
Ability to integrate with pricing	4.4	3.4	4.0
Processing speed	3.7	2.5	3.5
Support startup	4.4	2.9	3.8

Approximately 52% of the respondents are satisfied with the vendors' plans for the future, 41% do not know, and about 7% of the respondents are not happy with the vendors' plans.

Overall, areas that vendors need to improve are (1) software features, functionality and flexibility, (2) processing speed, and (3) coverage of assets.

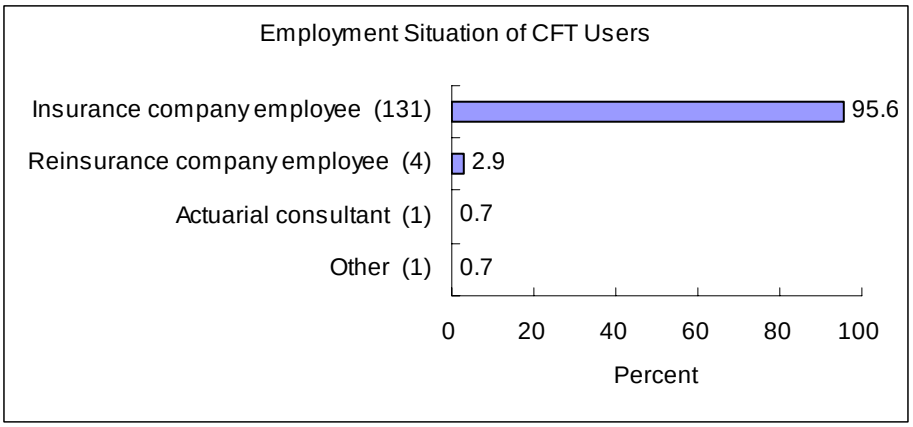
Appendix: Graphs and Tables for Individual Survey Questions

The pages which follow provide graphical and tabular summaries of the responses for each survey question. Where aggregate results are provided for all packages combined, the percentage of respondents choosing each response is shown. However, for individual packages, the numbers are too small for percentages to be appropriate, and the actual number of respondents is shown. In either case, the number in parentheses following each response is the number of respondents who selected the response.

SECTION 1: BACKGROUND INFORMATION

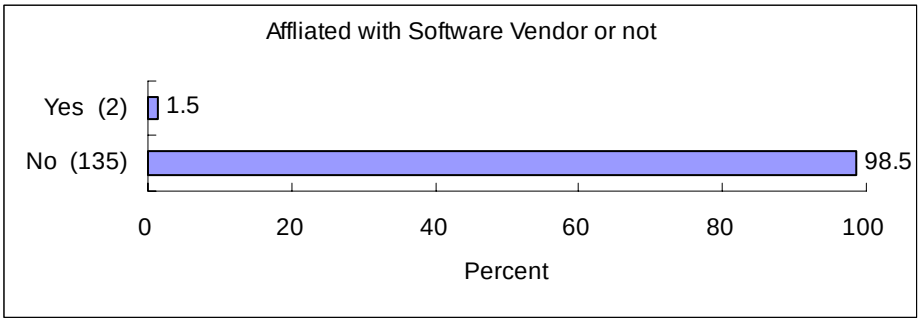
1. Which of the following best describes your employment situation? Please select one.

    - Insurance company employee
    - Reinsurance company employee
    - Actuarial consultant
    - Other, please specify



2. Are you employed by or affiliated with a cash flow testing software vendor?

    - Yes (go to 3)
    - No (go to 4)



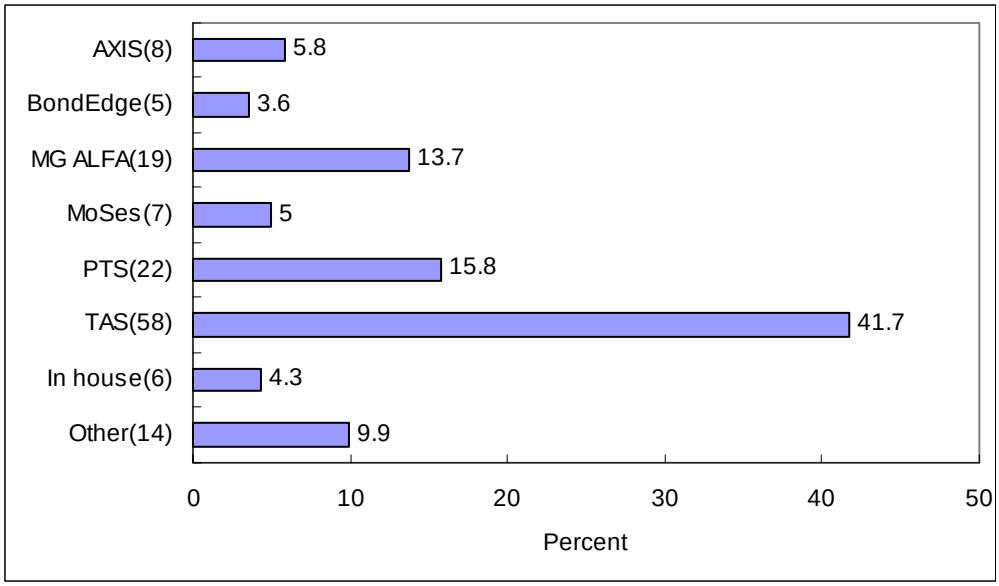
3. Which of the following best describes your affiliation with the software vendor? Please select as many as applicable.

		Frequency:
□ Founder / Owner	……	**0**
□ Partner / Principal / Senior Manager	……	**2**
□ Actuarial Consultant	……	**2**
□ Software Programming	……	**0**
□ Software Sales / Marketing	……	**0**
□ Other, please specify	……	**0**

4. Please select up to 3 packages that you are currently using and with which you are most familiar. Please note that you must answer this question in order to complete the rest of the survey.

□ AXIS – GGY Inc.
□ MoSes – Classic Solutions Risk Management
□ Prophet – Deloitte Touche
□ LEAPPS – Lewis & Ellis
□ MG ALFA – Milliman
□ PTS – SS&C Technologies
□ TAS – Tillinghast-Towers Perrin
□ Global CAP – Tillinghast-Towers Perrin
□ ProVal – Winkelvoss Technologies

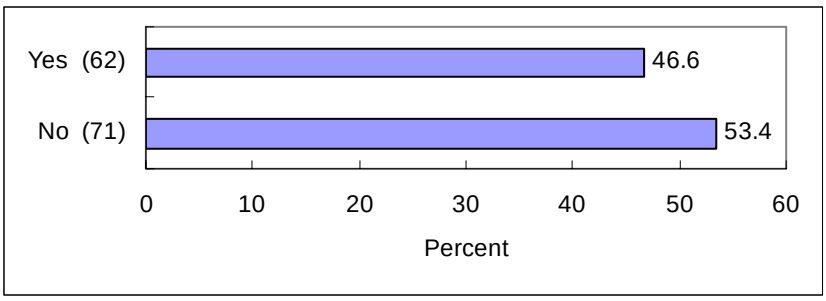
If you are using a Cash Flow Testing software package that is not listed above, please add it here. Short name: Full name: .



Note: AVE, ARCVAL, Bambrough, BondEdge, PolySys, Rex, Rimcon, Yieldbook were not listed in the responses and were inputted by the users. Packages with less than 5 respondents such as AVE, ARCVAL, Bambrough, PolySys, Prophet, Rex, Rimcon, Yieldbook are categorized into the "Other" group.

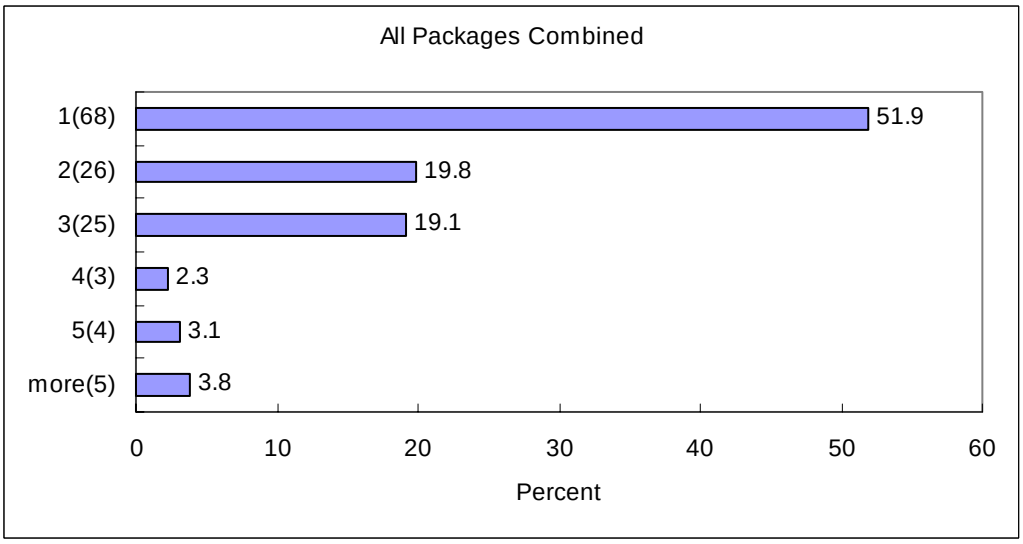
5. Are you the appointed actuary for your company or the companies with which you consult?

□ Yes
□ No



6. Please indicate the number of companies for which you use cash flow testing software.

1 □ 2 □ 3 □ 4 □ 5 □ More than 5 □



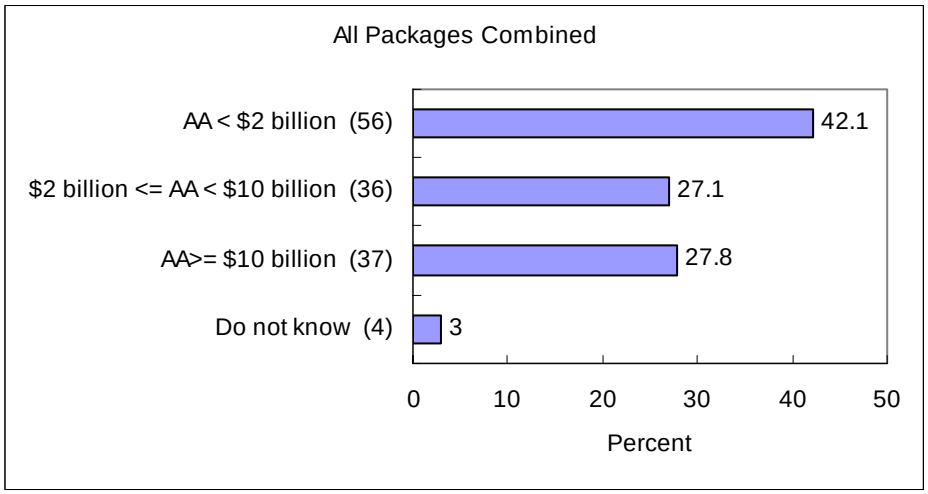
Frequency: (Blank cells have 0 respondents)

Packages	Number of Companies						Total
	1	2	3	4	5	more	
AXIS	6	2					8
BondEdge	1	3	1				5
MG ALFA	10	2	3	2	1		18
MoSes		2	2		1		5
PTS	11	3	6		0	2	22
TAS	27	11	11		2	3	54
In house	3	2					5
Other	10	1	2	1			14
Total	68	26	25	3	4	5	131

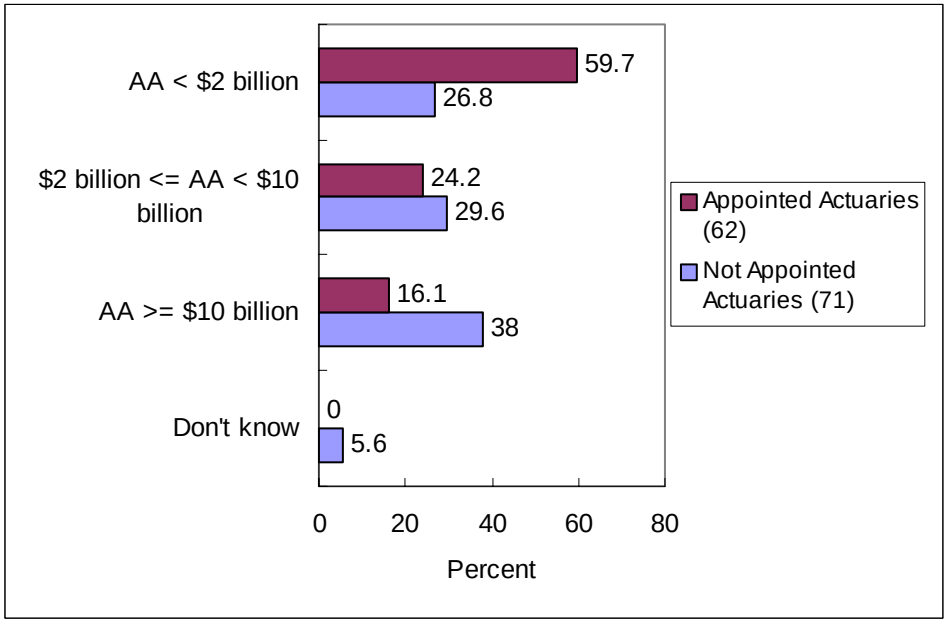
7. What are the total admitted assets of the company(ies) for which cash flow testing is currently being performed?

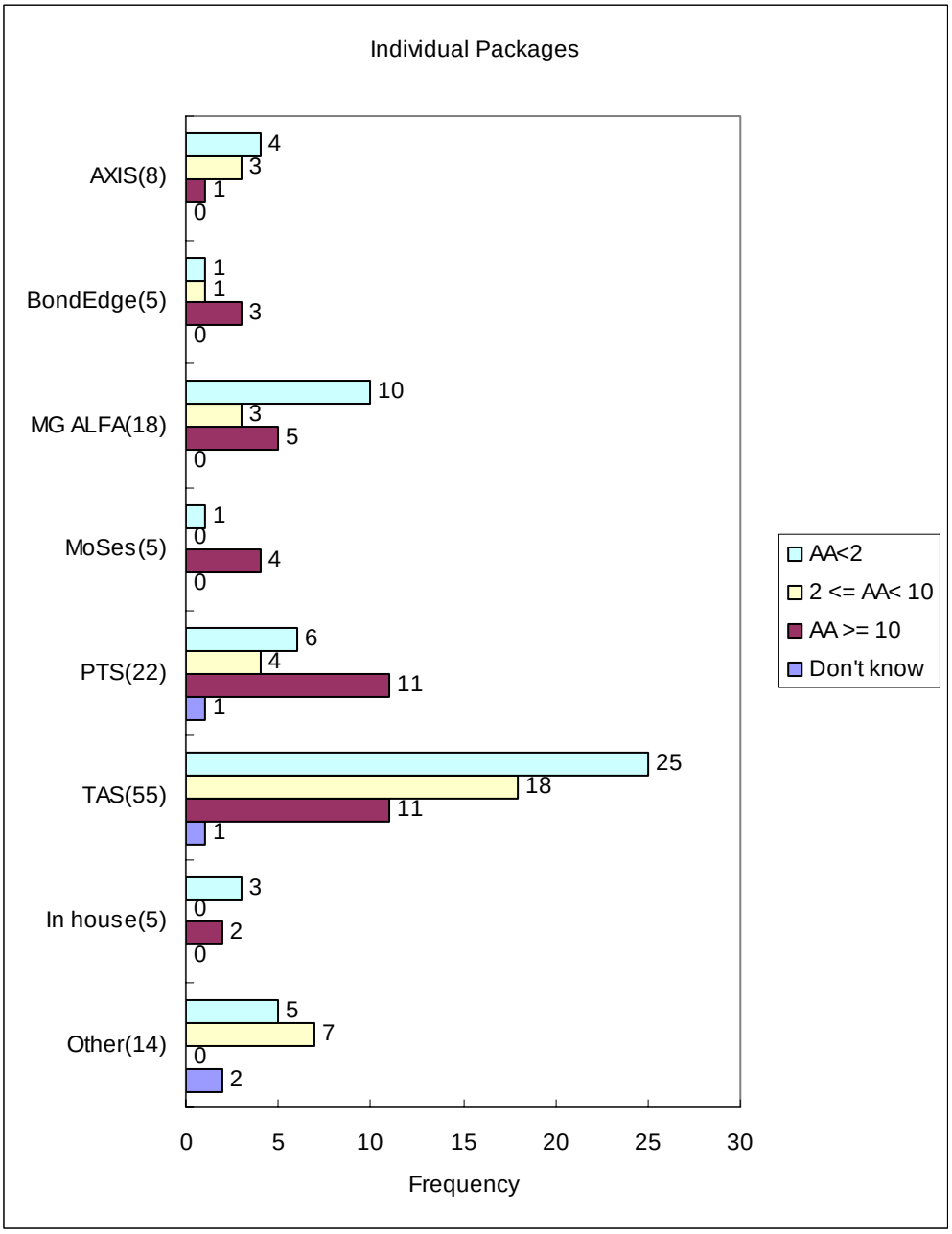
- Admitted Assets < $2 billion
- $2 billion <= Admitted Assets < $10 billion
- Admitted Assets >= $10 billion
- Don't know

AA: Admitted Assets



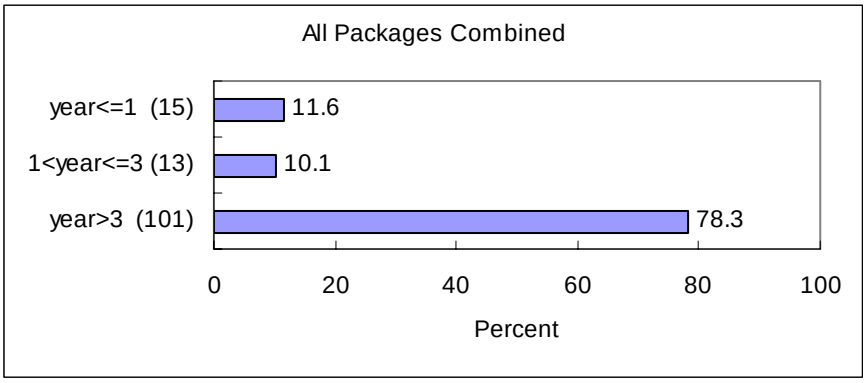
Percentages of responses provided by appointed actuaries and non-appointed actuaries.



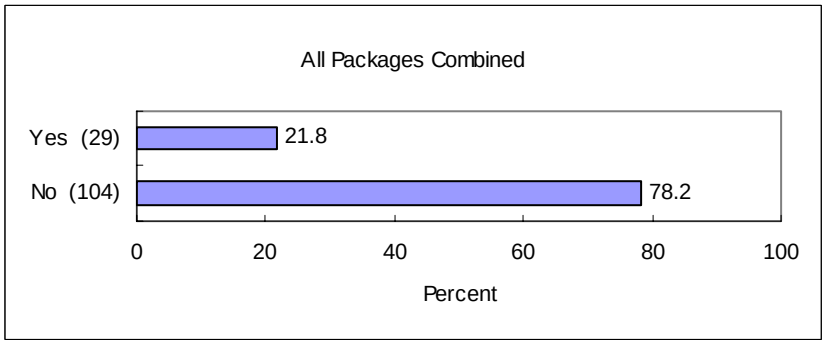


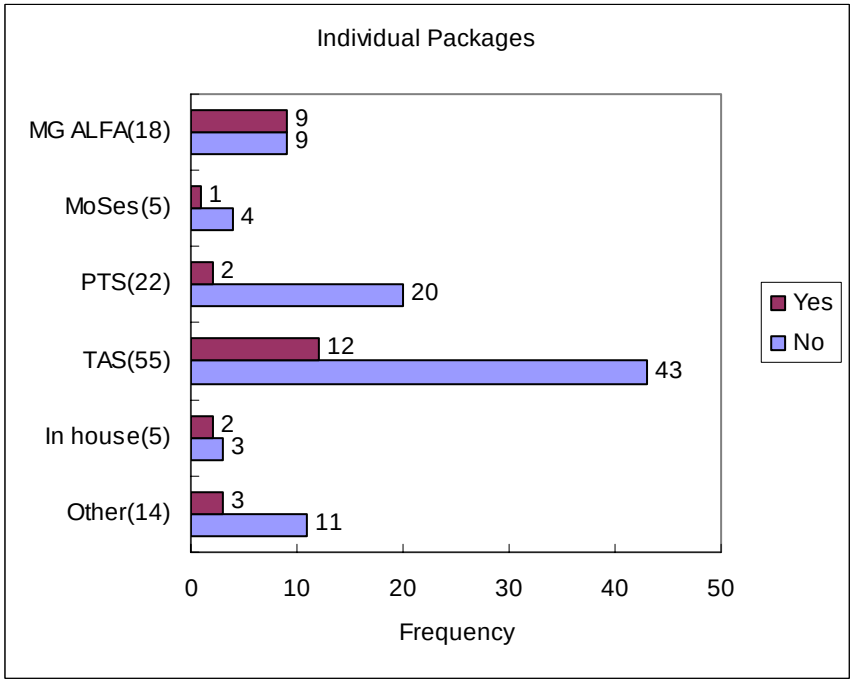
8. How many years have you been using the current Cash Flow Testing Software package(s)? (Single Answer for multiple software packages; go to 9)

Years	Package one	Package two
Less than 1 year	☐	☐
Greater than 1 year but less than 3 years	☐	☐
Greater than 3 years	☐	☐



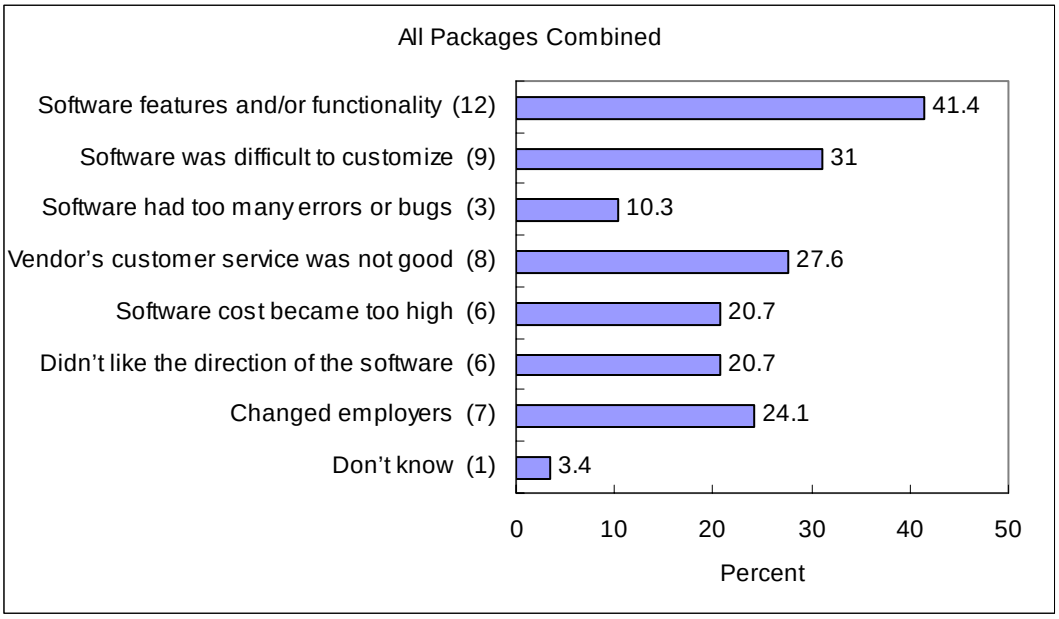
9. Are there Cash Flow Testing software package(s) that you no longer use? (Single)
   - ☐ Yes (go to 10)
   - ☐ No (go to 11)





10. If other software packages have been used in the past, please choose the reason(s) for the change (you may select more than one).

Software features and/or functionality could no longer meet needs	☐
Software was difficult to customize or work with	☐
Software had too many errors or bugs	☐
Vendor's customer service was not good	☐
Software cost became too high	☐
Didn't like the direction of the software	☐
Changed employers	☐
Don't know	☐
Other, please specify	☐

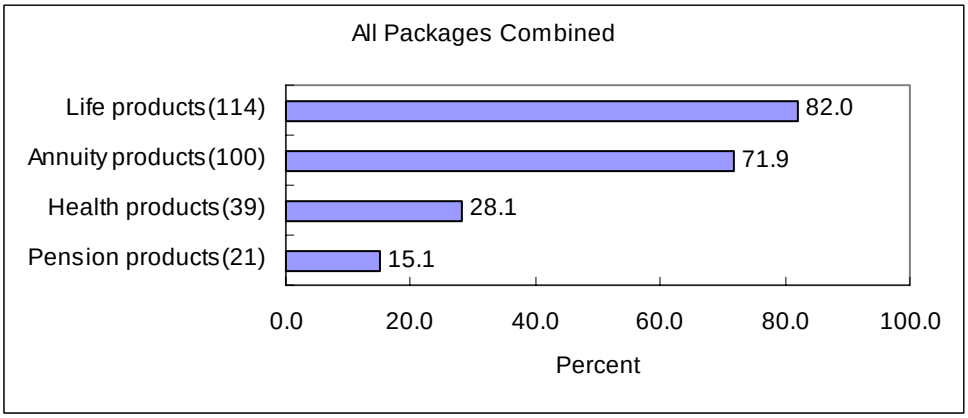


Note: There are 29 respondents in total who had changed software packages. The percentages are based on the total respondents (29), and a respondent can answer more than once.

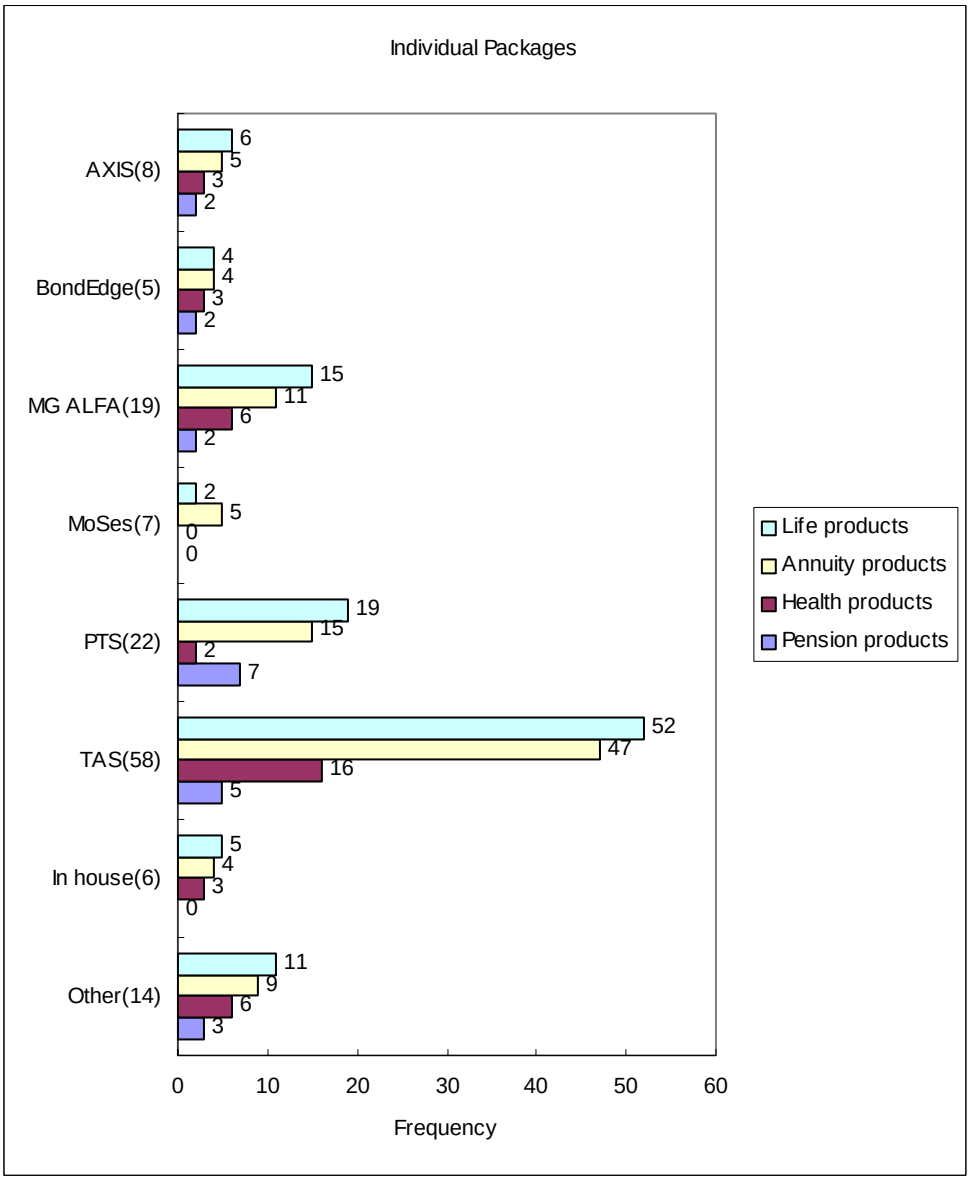
SECTION 2: CASH FLOW TESTING SOFTWARE FEATURES

11. The Cash Flow Testing software package(s) is (are) currently being used for which of the following insurance products?

	Package one	Package two
Life products	☐	☐
Annuity products	☐	☐
Health products	☐	☐
Pension products	☐	☐
Not Used for Insurance Products	☐	☐
Other, please specify	☐	☐

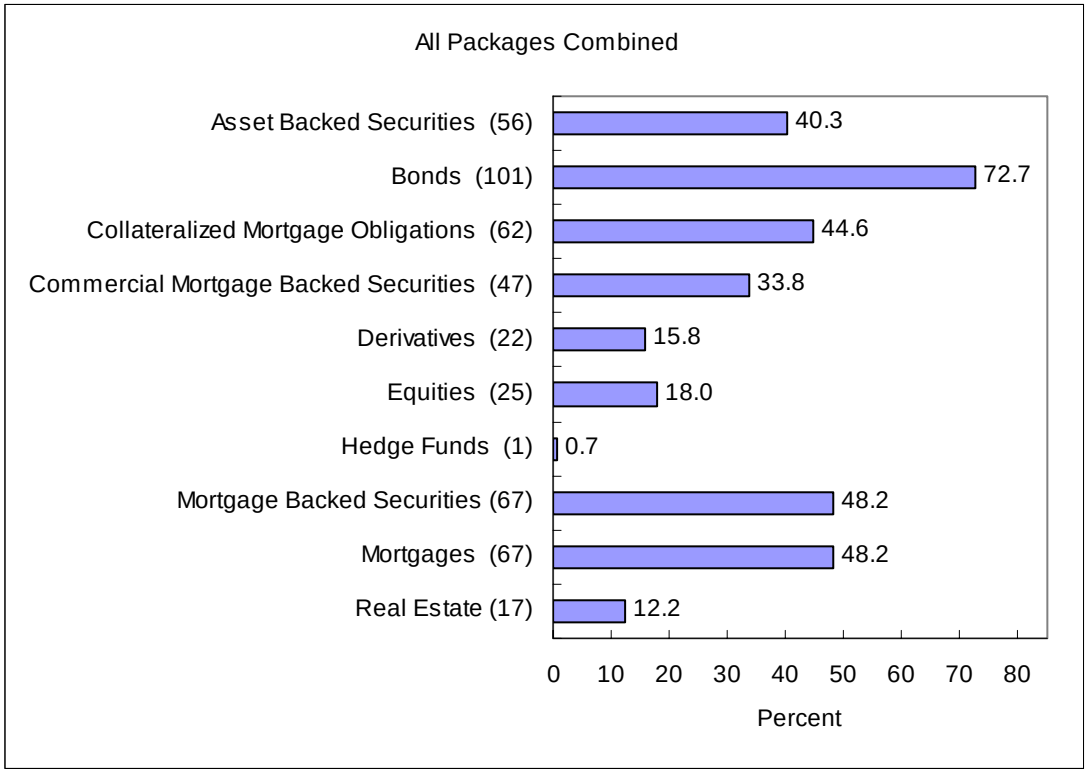


Note: The percentages are based on the total respondents (139), and respondents may apply a package to more than one product.

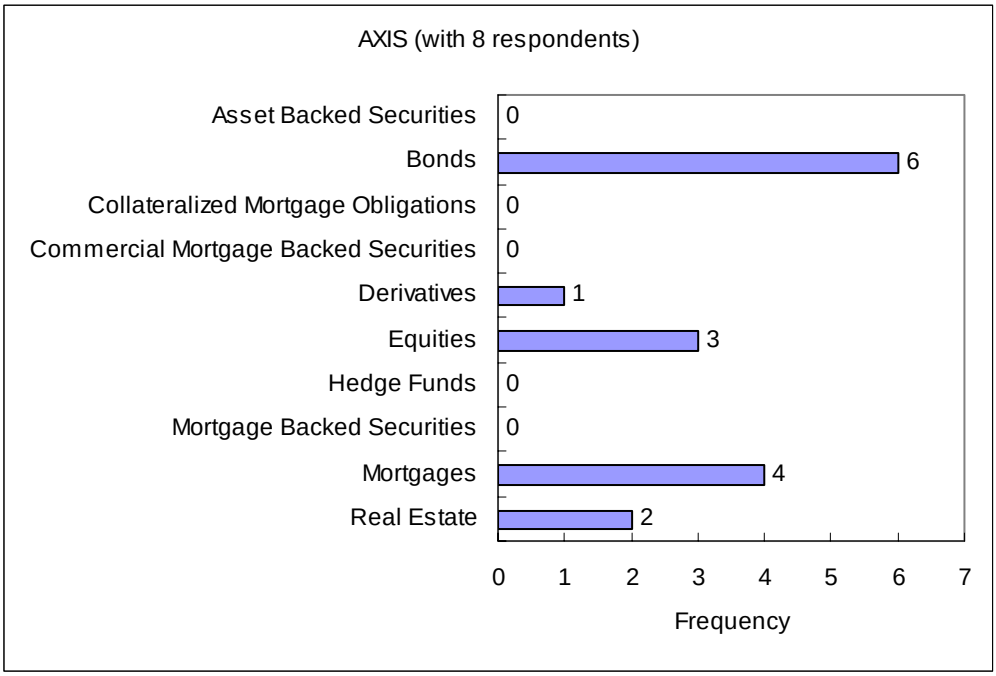


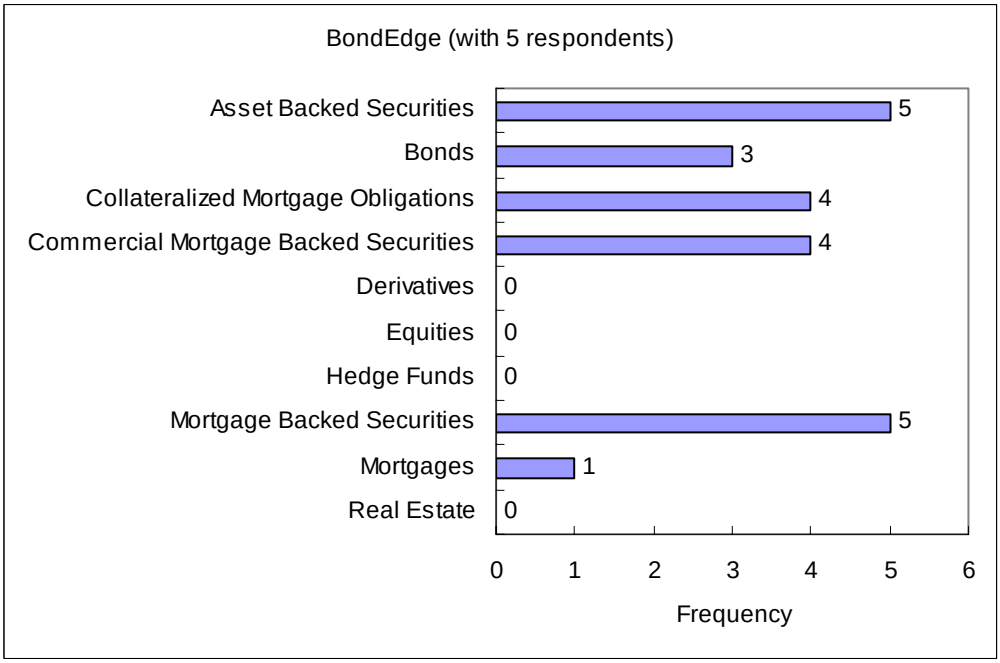
12. The Cash Flow Testing software package(s) is (are) currently being used for which of the asset categories (you may select more than one)?

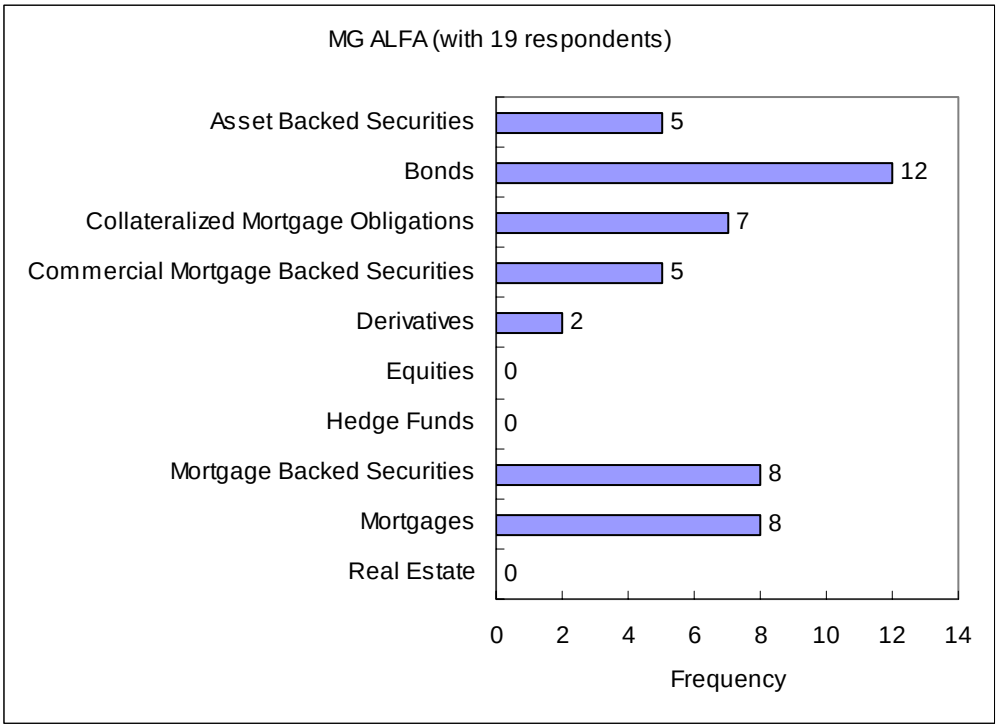
	Package one	Package two
Asset Backed Securities	☐	☐
Bonds	☐	☐
Collateralized Mortgage Obligations	☐	☐
Commercial Mortgage Backed Securities	☐	☐
Derivatives	☐	☐
Equities	☐	☐
Hedge Funds	☐	☐
Mortgage Backed Securities	☐	☐
Mortgages	☐	☐
Real Estate	☐	☐
Not Used for Assets	☐	☐
Other, please specify	☐	☐

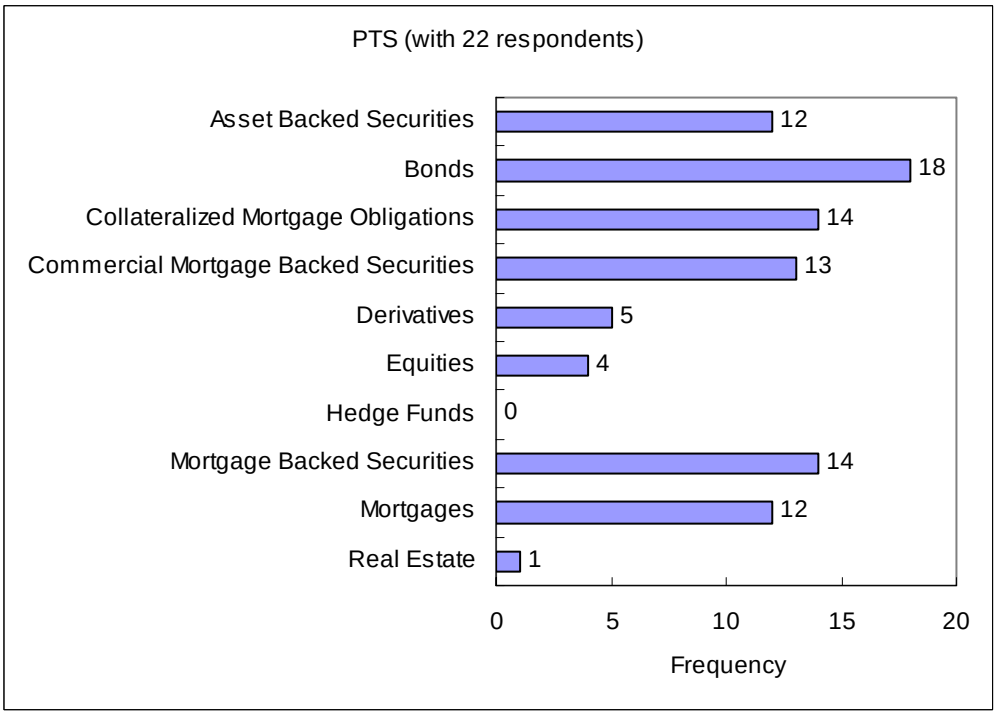


Note: The percentages are based on the total respondents (139), and respondents may apply a package to more than one asset category.


AXIS (with 8 respondents)
Asset Backed Securities
Bonds
Collateralized Mortgage Obligations
Commercial Mortgage Backed Securities
Derivatives
Equities
Hedge Funds
Mortgage Backed Securities
Mortgages
Real Estate
0
6
0
0
1
3
0
0
4
2
0 1 2 3 4 5 6 7
Frequency


BondEdge (with 5 respondents)
Asset Backed Securities
Bonds
Collateralized Mortgage Obligations
Commercial Mortgage Backed Securities
Derivatives
Equities
Hedge Funds
Mortgage Backed Securities
Mortgages
Real Estate
5
3
4
4
0
0
0
5
1
0
0 1 2 3 4 5 6
Frequency


MG ALFA (with 19 respondents)
Asset Backed Securities
Bonds
Collateralized Mortgage Obligations
Commercial Mortgage Backed Securities
Derivatives
Equities
Hedge Funds
Mortgage Backed Securities
Mortgages
Real Estate
5
12
7
5
2
0
0
8
8
0
0 2 4 6 8 10 12 14
Frequency


PTS (with 22 respondents)
Asset Backed Securities
Bonds
Collateralized Mortgage Obligations
Commercial Mortgage Backed Securities
Derivatives
Equities
Hedge Funds
Mortgage Backed Securities
Mortgages
Real Estate
12
18
14
13
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4
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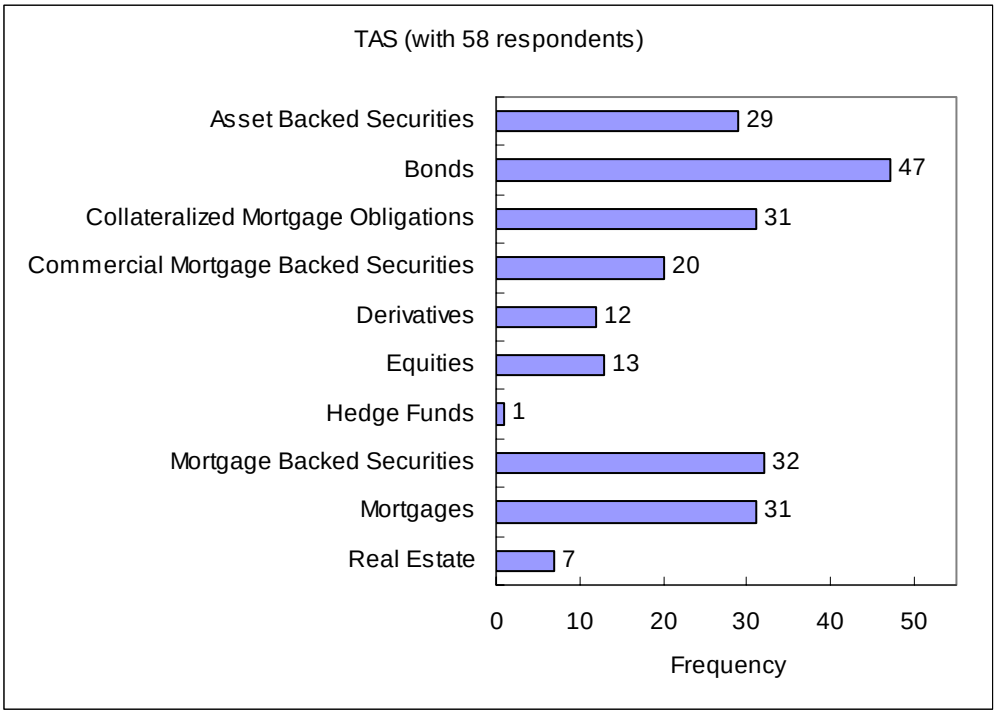
14
12
1
0 5 10 15 20
Frequency


TAS (with 58 respondents)
Asset Backed Securities
29
Bonds
47
Collateralized Mortgage Obligations
31
Commercial Mortgage Backed Securities
20
Derivatives
12
Equities
13
Hedge Funds
1
Mortgage Backed Securities
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Mortgages
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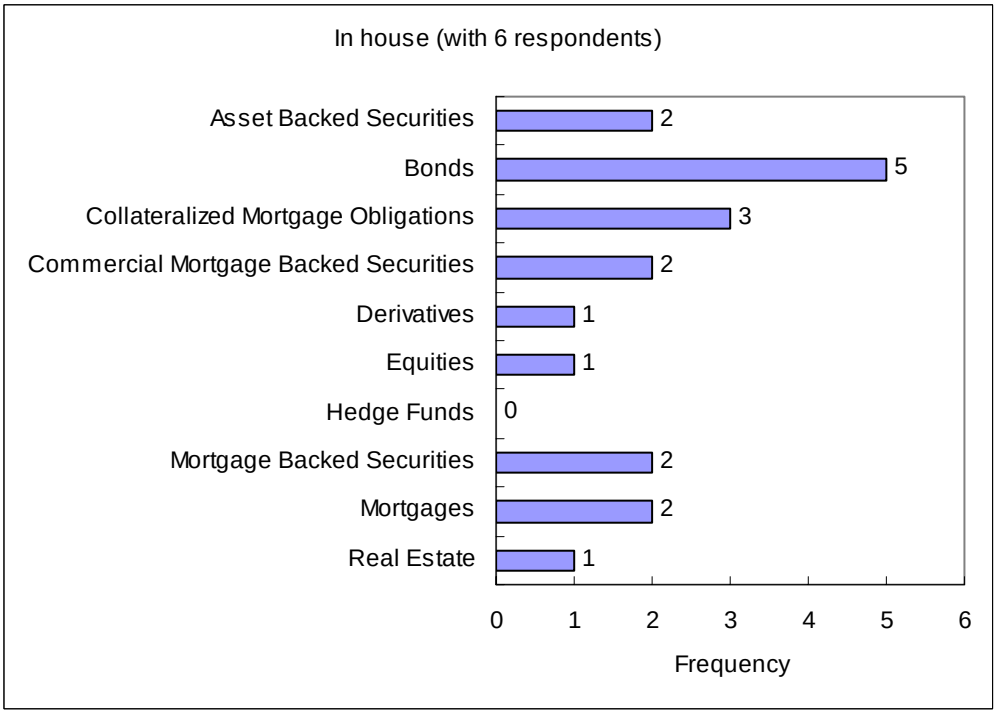
20
30
40
50
Frequency


In house (with 6 respondents)
Asset Backed Securities
2
Bonds
5
Collateralized Mortgage Obligations
3
Commercial Mortgage Backed Securities
2
Derivatives
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Equities
1
Hedge Funds
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Mortgage Backed Securities
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4
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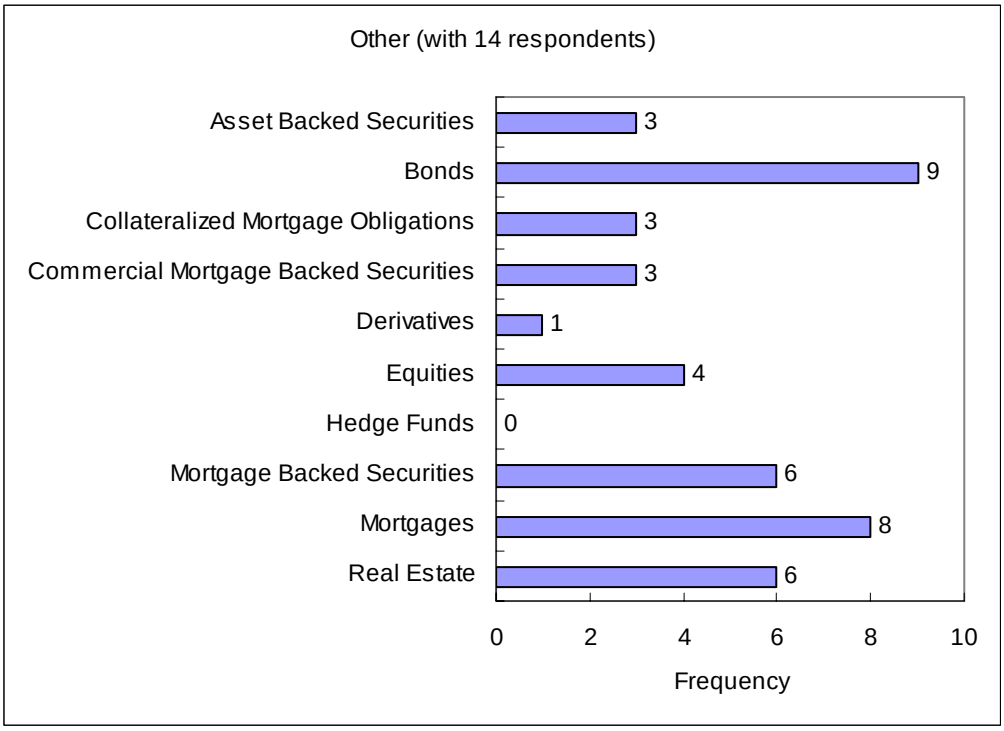
6
Frequency


Other (with 14 respondents)
Asset Backed Securities
Bonds
Collateralized Mortgage Obligations
Commercial Mortgage Backed Securities
Derivatives
Equities
Hedge Funds
Mortgage Backed Securities
Mortgages
Real Estate
3
9
3
3
1
4
0
6
8
6
0
2
4
6
8
10
Frequency

13. Besides Cash Flow Testing, for what other purposes are the software package(s) being used (you may select more than one)? (Multiple answers for multiple software packages, go to 14)

- Pricing

	Package one	Package two
New product pricing	□	□
Inforce profitability	□	□

- Illustration

	Package one	Package two
Sales illustration	□	□
Illustration compliance	□	□

- Financial reporting/management

	Package one	Package two
Statutory reporting	□	□
GAAP reporting	□	□
Reporting based on other accounting principles	□	□
Earnings projection	□	□

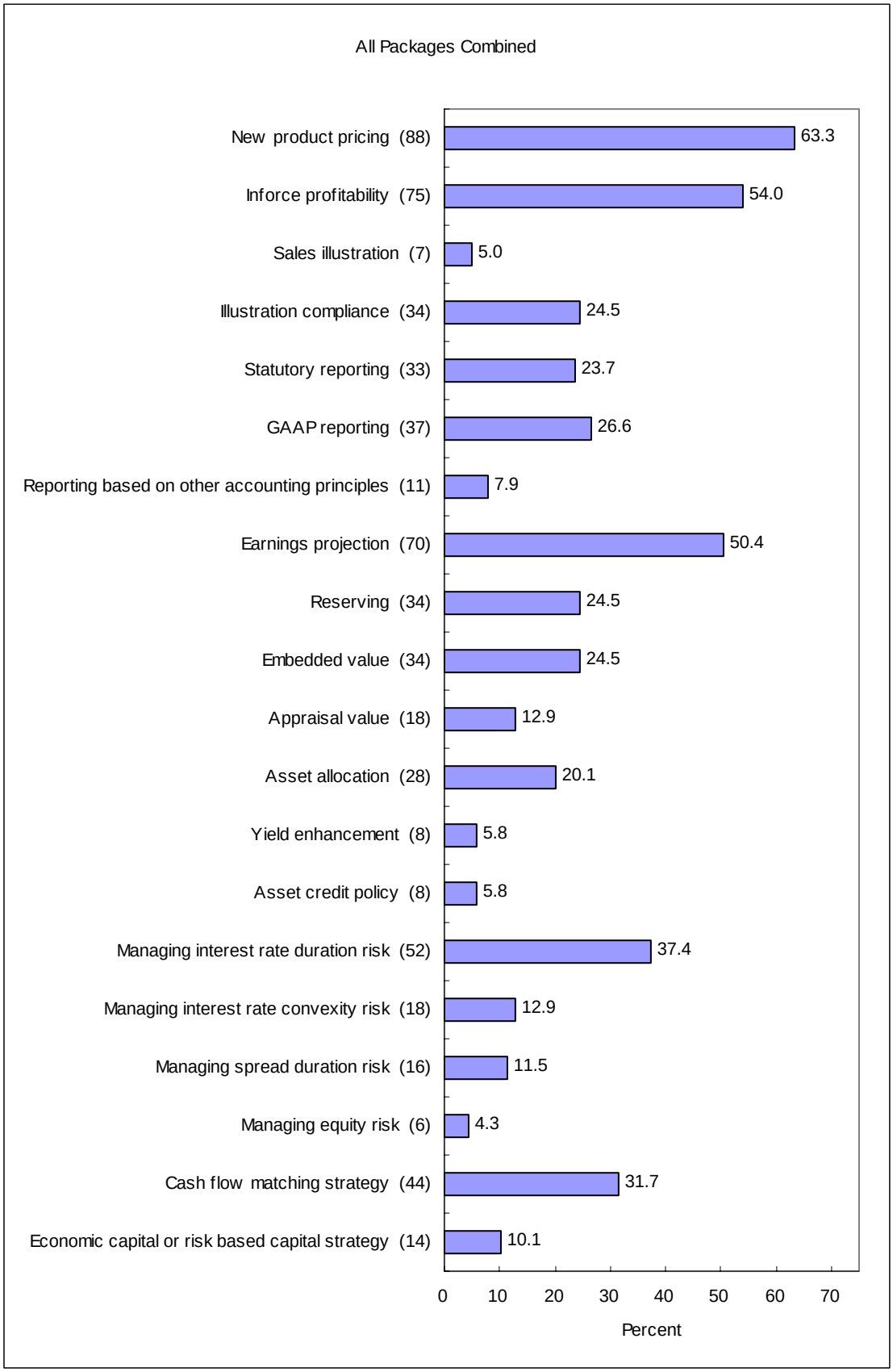
- Valuation

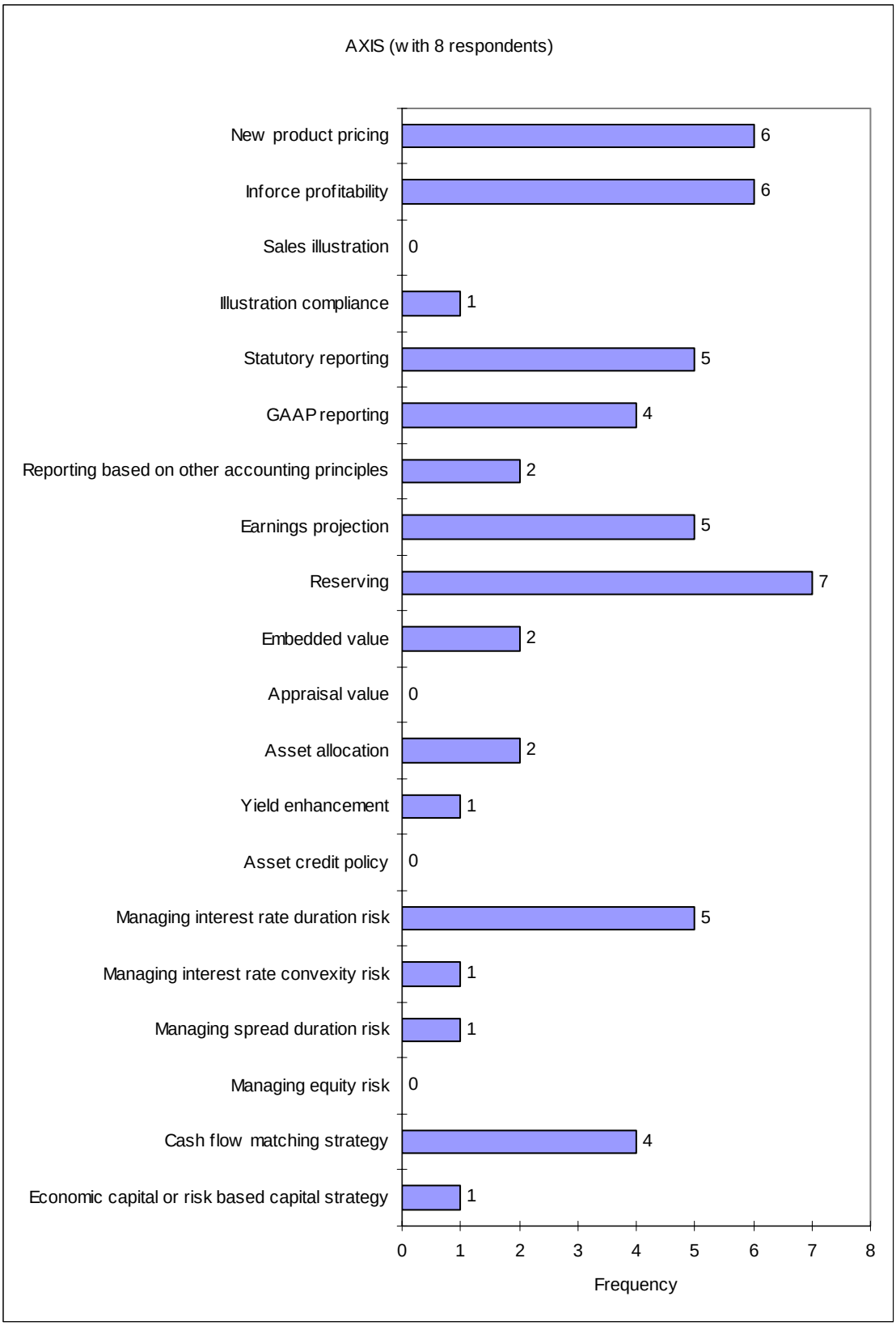
	Package one	Package two
Reserving	□	□
Embedded value	□	□
Appraisal value	□	□

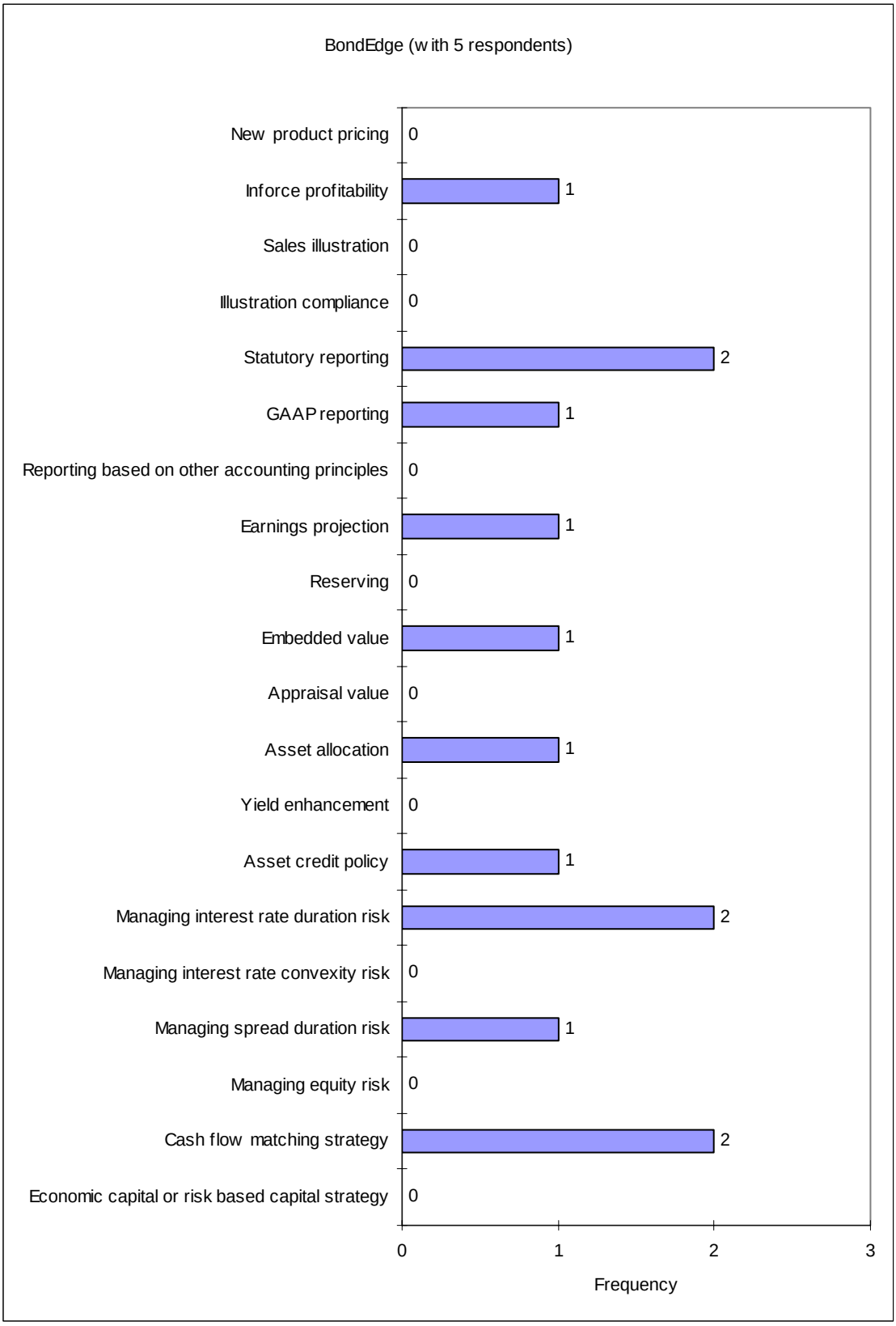
- ALM and Risk management

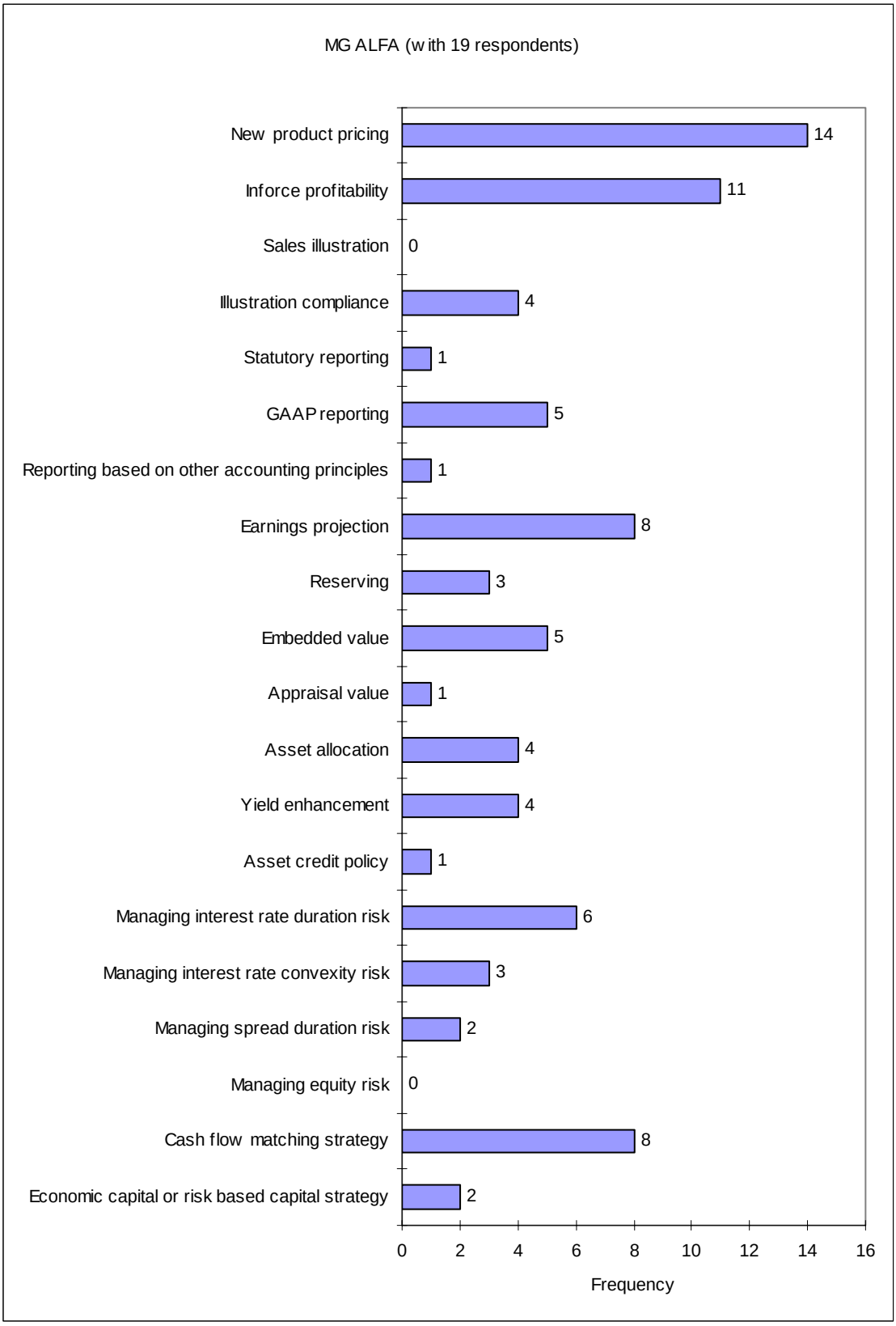
	Package one	Package two
Asset allocation	□	□
Yield enhancement	□	□
Asset credit policy	□	□
Managing interest rate duration risk	□	□
Managing interest rate convexity risk	□	□
Managing spread duration risk	□	□
Managing equity risk	□	□
Cash flow matching strategy	□	□
Economic capital or risk based capital strategy	□	□

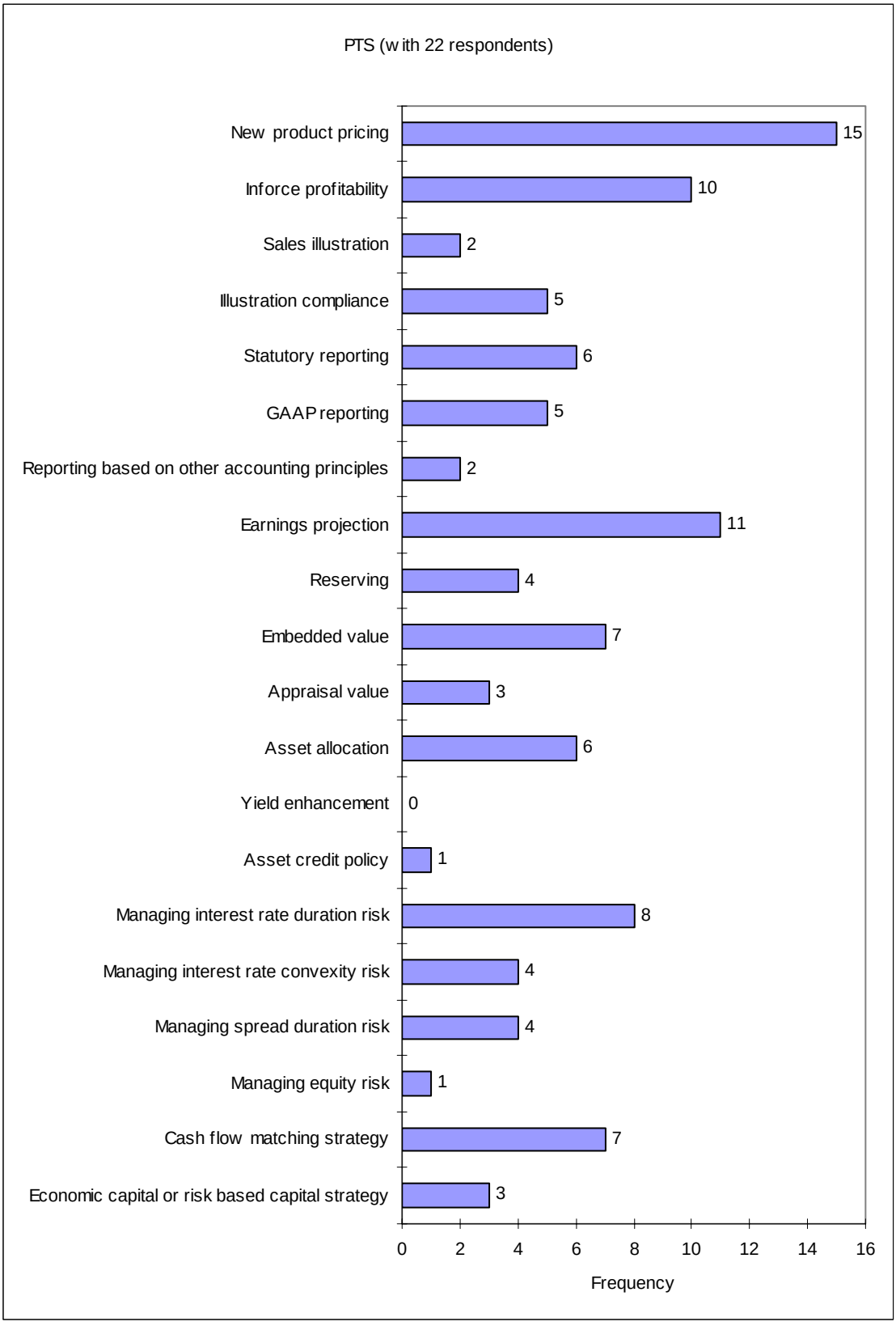
Note: The percentages in following graph for this question are based on the total respondents (139), and respondents may use a package for more than one purpose.

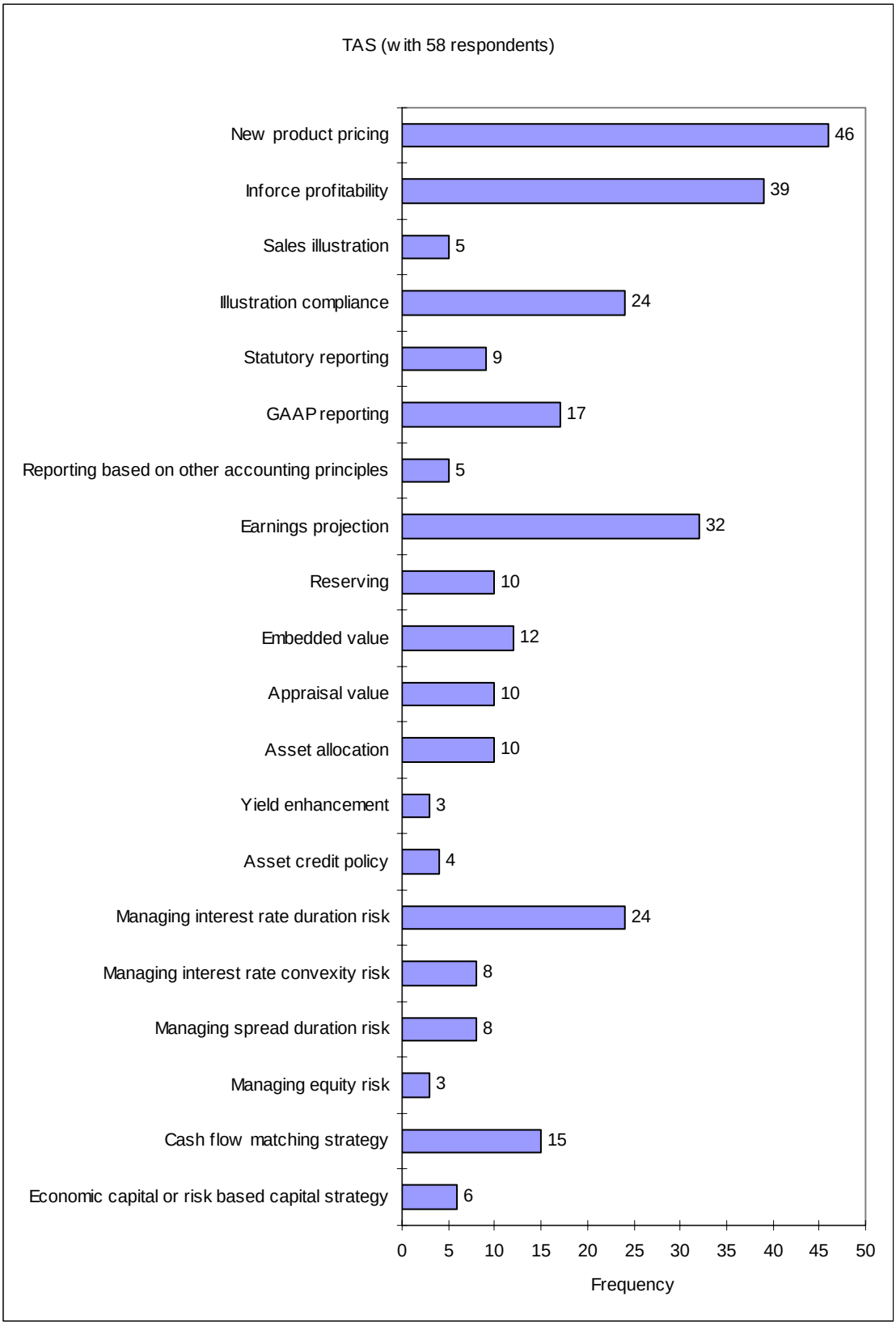

All Packages Combined
New product pricing (88)
63.3
Inforce profitability (75)
54.0
Sales illustration (7)
5.0
Illustration compliance (34)
24.5
Statutory reporting (33)
23.7
GAAP reporting (37)
26.6
Reporting based on other accounting principles (11)
7.9
Earnings projection (70)
50.4
Reserving (34)
24.5
Embedded value (34)
24.5
Appraisal value (18)
12.9
Asset allocation (28)
20.1
Yield enhancement (8)
5.8
Asset credit policy (8)
5.8
Managing interest rate duration risk (52)
37.4
Managing interest rate convexity risk (18)
12.9
Managing spread duration risk (16)
11.5
Managing equity risk (6)
4.3
Cash flow matching strategy (44)
31.7
Economic capital or risk based capital strategy (14)
10.1
0
10
20
30
40
50
60
70
Percent

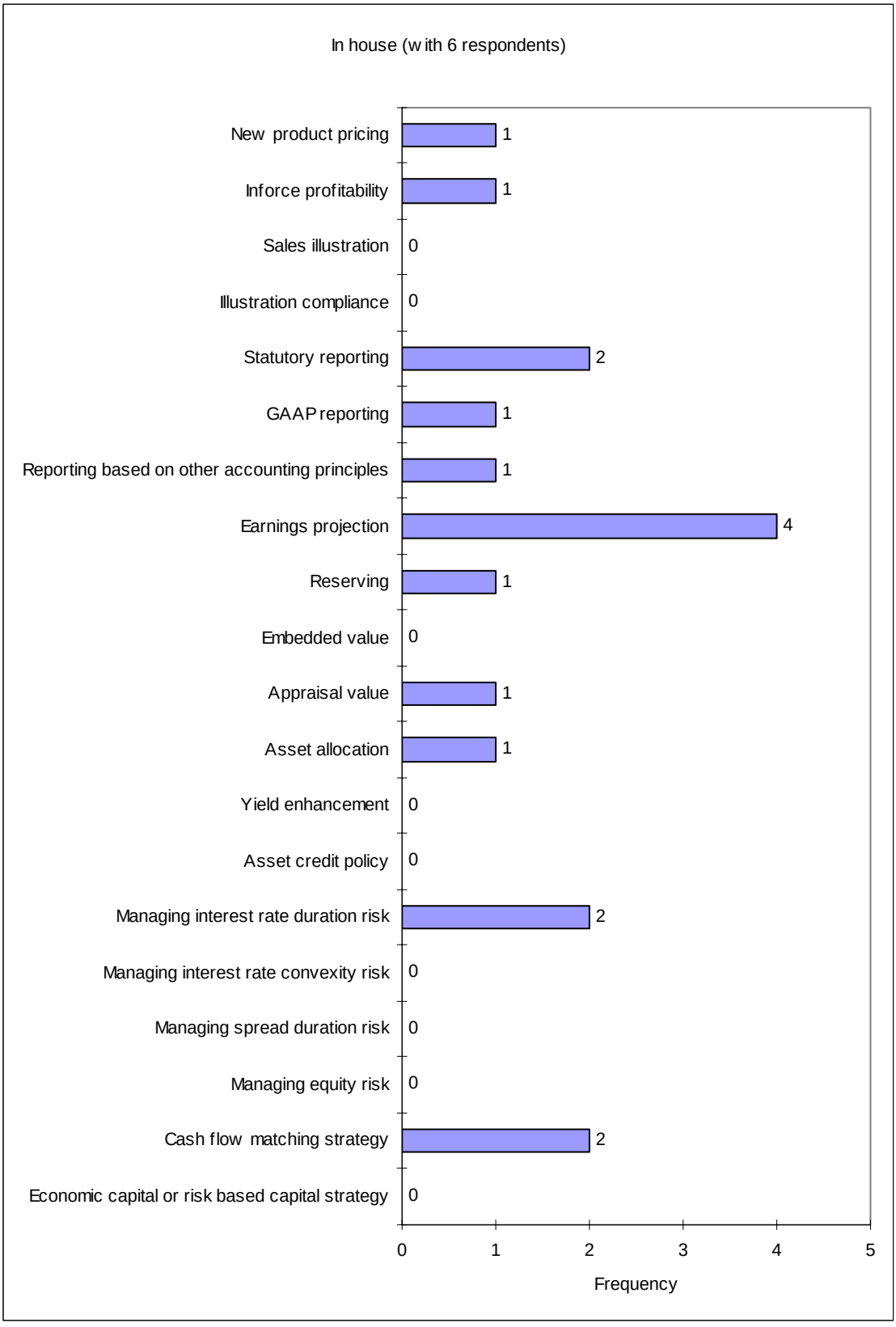

AXIS (with 8 respondents)
New product pricing
6
Inforce profitability
6
Sales illustration
0
Illustration compliance
1
Statutory reporting
5
GAAP reporting
4
Reporting based on other accounting principles
2
Earnings projection
5
Reserving
7
Embedded value
2
Appraisal value
0
Asset allocation
2
Yield enhancement
1
Asset credit policy
0
Managing interest rate duration risk
5
Managing interest rate convexity risk
1
Managing spread duration risk
1
Managing equity risk
0
Cash flow matching strategy
4
Economic capital or risk based capital strategy
1
0
1
2
3
4
5
6
7
8
Frequency

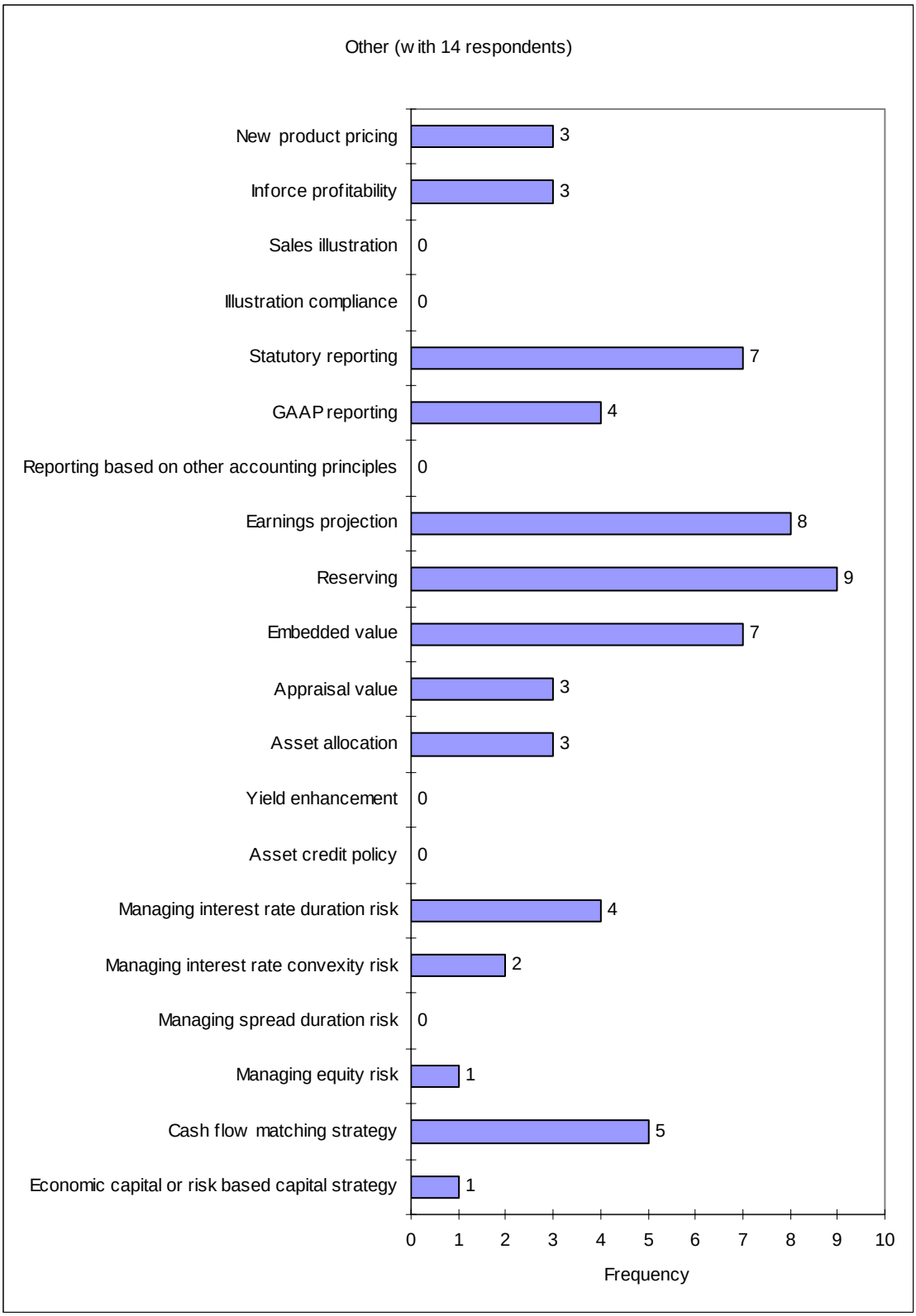

BondEdge (with 5 respondents)
New product pricing
Inforce profitability
Sales illustration
Illustration compliance
Statutory reporting
GAAP reporting
Reporting based on other accounting principles
Earnings projection
Reserving
Embedded value
Appraisal value
Asset allocation
Yield enhancement
Asset credit policy
Managing interest rate duration risk
Managing interest rate convexity risk
Managing spread duration risk
Managing equity risk
Cash flow matching strategy
Economic capital or risk based capital strategy
0
1
0
0
2
1
0
1
0
1
0
1
0
1
2
0
1
0
2
0
0
1
2
3
Frequency


MG ALFA (with 19 respondents)
New product pricing
14
Inforce profitability
11
Sales illustration
0
Illustration compliance
4
Statutory reporting
1
GAAP reporting
5
Reporting based on other accounting principles
1
Earnings projection
8
Reserving
3
Embedded value
5
Appraisal value
1
Asset allocation
4
Yield enhancement
4
Asset credit policy
1
Managing interest rate duration risk
6
Managing interest rate convexity risk
3
Managing spread duration risk
2
Managing equity risk
0
Cash flow matching strategy
8
Economic capital or risk based capital strategy
2
0
2
4
6
8
10
12
14
16
Frequency


PTS (with 22 respondents)
New product pricing
15
Inforce profitability
10
Sales illustration
2
Illustration compliance
5
Statutory reporting
6
GAAP reporting
5
Reporting based on other accounting principles
2
Earnings projection
11
Reserving
4
Embedded value
7
Appraisal value
3
Asset allocation
6
Yield enhancement
0
Asset credit policy
1
Managing interest rate duration risk
8
Managing interest rate convexity risk
4
Managing spread duration risk
4
Managing equity risk
1
Cash flow matching strategy
7
Economic capital or risk based capital strategy
3
0
2
4
6
8
10
12
14
16
Frequency

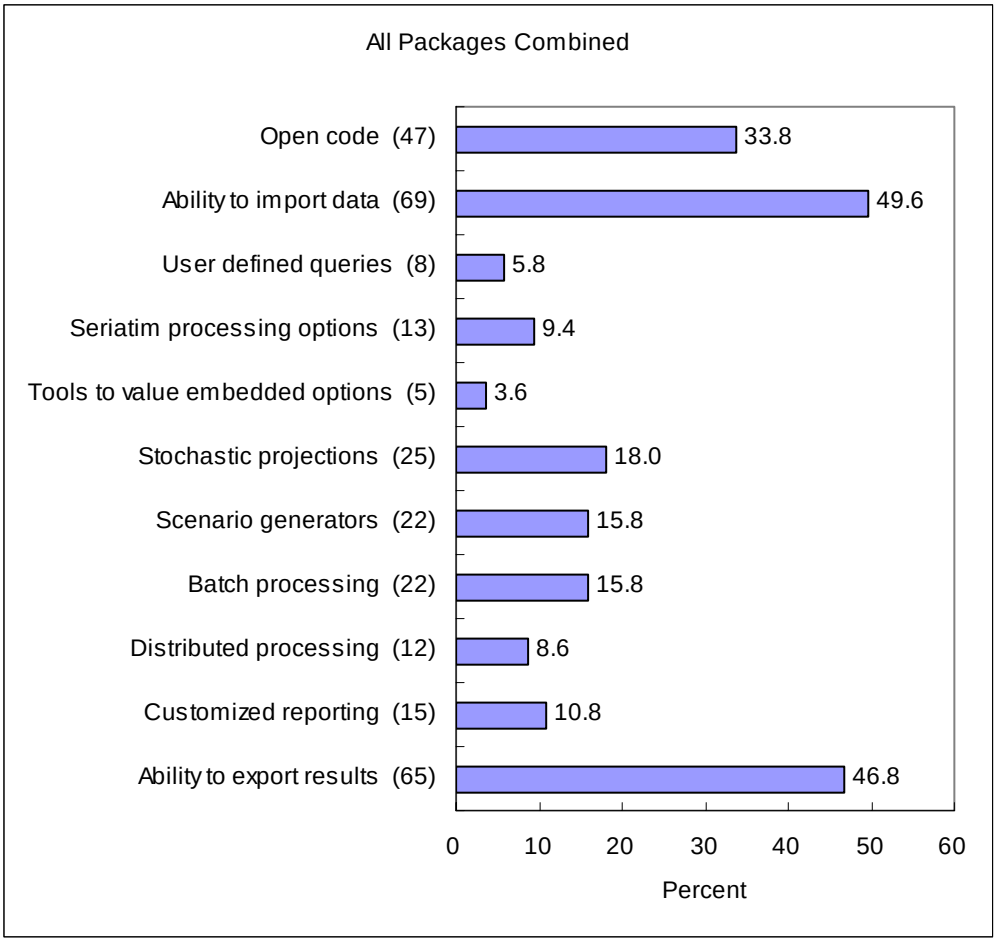

TAS (with 58 respondents)
New product pricing
46
Inforce profitability
39
Sales illustration
5
Illustration compliance
24
Statutory reporting
9
GAAP reporting
17
Reporting based on other accounting principles
5
Earnings projection
32
Reserving
10
Embedded value
12
Appraisal value
10
Asset allocation
10
Yield enhancement
3
Asset credit policy
4
Managing interest rate duration risk
24
Managing interest rate convexity risk
8
Managing spread duration risk
8
Managing equity risk
3
Cash flow matching strategy
15
Economic capital or risk based capital strategy
6
0 5 10 15 20 25 30 35 40 45 50
Frequency


In house (w ith 6 respondents)
New product pricing
1
Inforce profitability
1
Sales illustration
0
Illustration compliance
0
Statutory reporting
2
GAAP reporting
1
Reporting based on other accounting principles
1
Earnings projection
4
Reserving
1
Embedded value
0
Appraisal value
1
Asset allocation
1
Yield enhancement
0
Asset credit policy
0
Managing interest rate duration risk
2
Managing interest rate convexity risk
0
Managing spread duration risk
0
Managing equity risk
0
Cash flow matching strategy
2
Economic capital or risk based capital strategy
0
0
1
2
3
4
5
Frequency

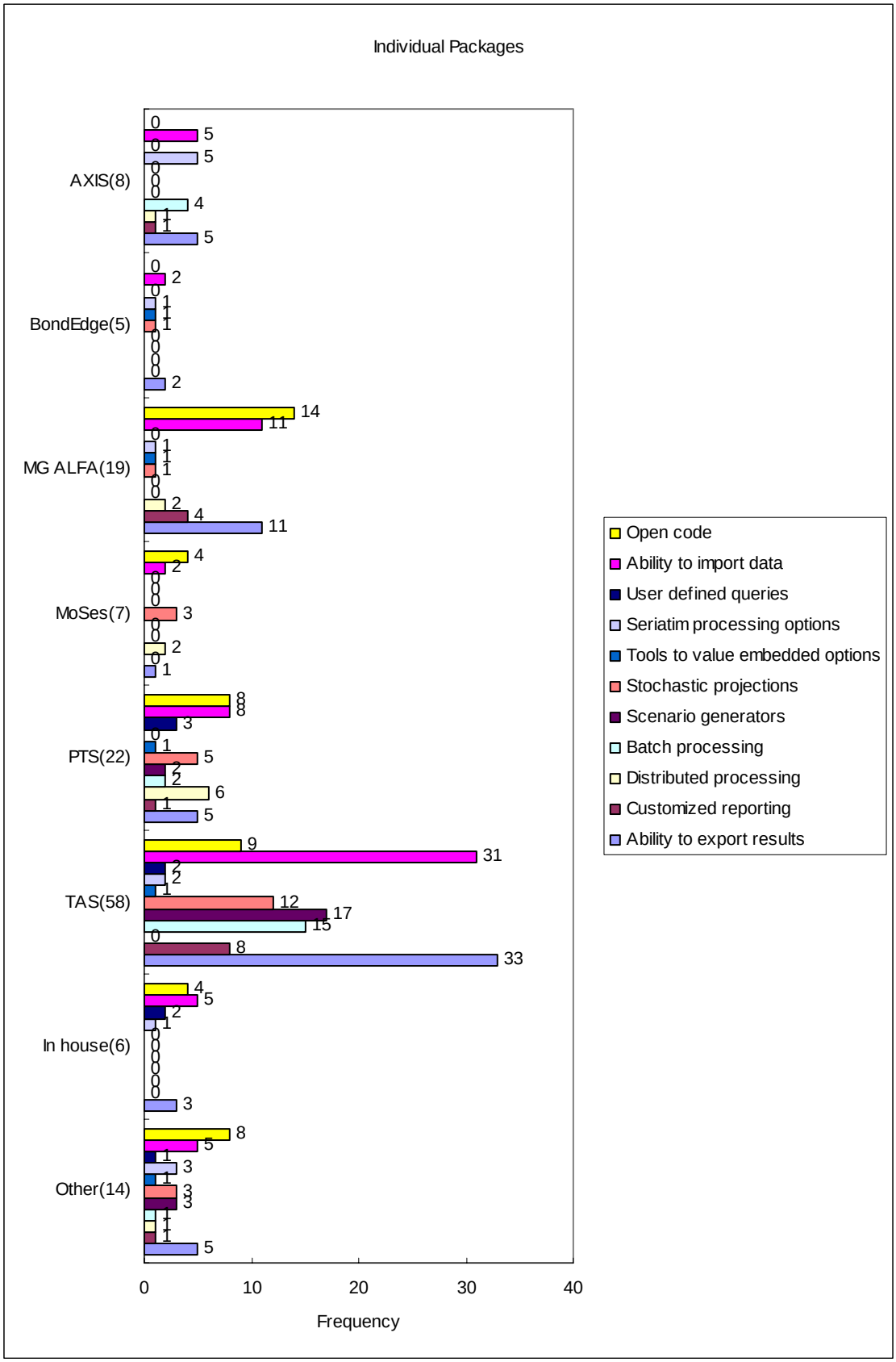

Other (with 14 respondents)
New product pricing
3
Inforce profitability
3
Sales illustration
0
Illustration compliance
0
Statutory reporting
7
GAAP reporting
4
Reporting based on other accounting principles
0
Earnings projection
8
Reserving
9
Embedded value
7
Appraisal value
3
Asset allocation
3
Yield enhancement
0
Asset credit policy
0
Managing interest rate duration risk
4
Managing interest rate convexity risk
2
Managing spread duration risk
0
Managing equity risk
1
Cash flow matching strategy
5
Economic capital or risk based capital strategy
1
0 1 2 3 4 5 6 7 8 9 10
Frequency

14. Choose up to 3 features below that you find most useful in the Cash Flow Testing software package(s).

	Package one	Package two
Open code (ability to change source code)	☐	☐
Ability to import data from a variety of other applications (e.g. spreadsheets, text files, etc.)	☐	☐
User defined queries	☐	☐
Seriatim processing options	☐	☐
Tools to value embedded options in assets and liabilities	☐	☐
Stochastic projections	☐	☐
Scenario generator	☐	☐
Batch processing	☐	☐
Distributed processing	☐	☐
Customized reporting	☐	☐
Ability to export results to Excel or other spreadsheet applications	☐	☐
Don't know	☐	☐
Other, please specify	☐	☐



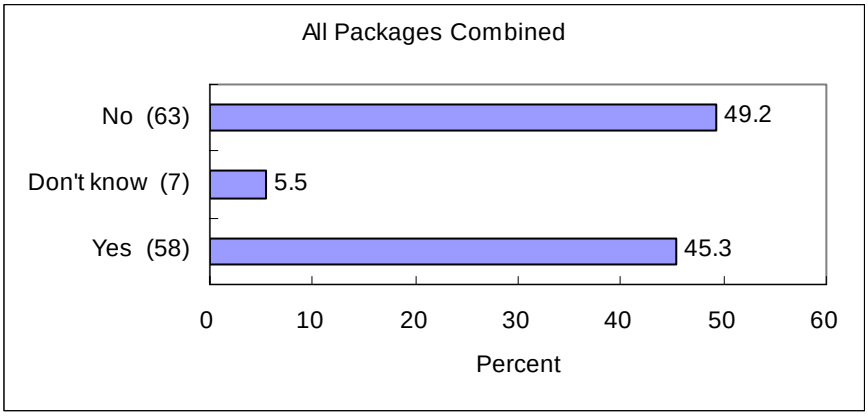
Note: The percentages are based on the total respondents (139), and respondents can choose up to 3 features for each package used.

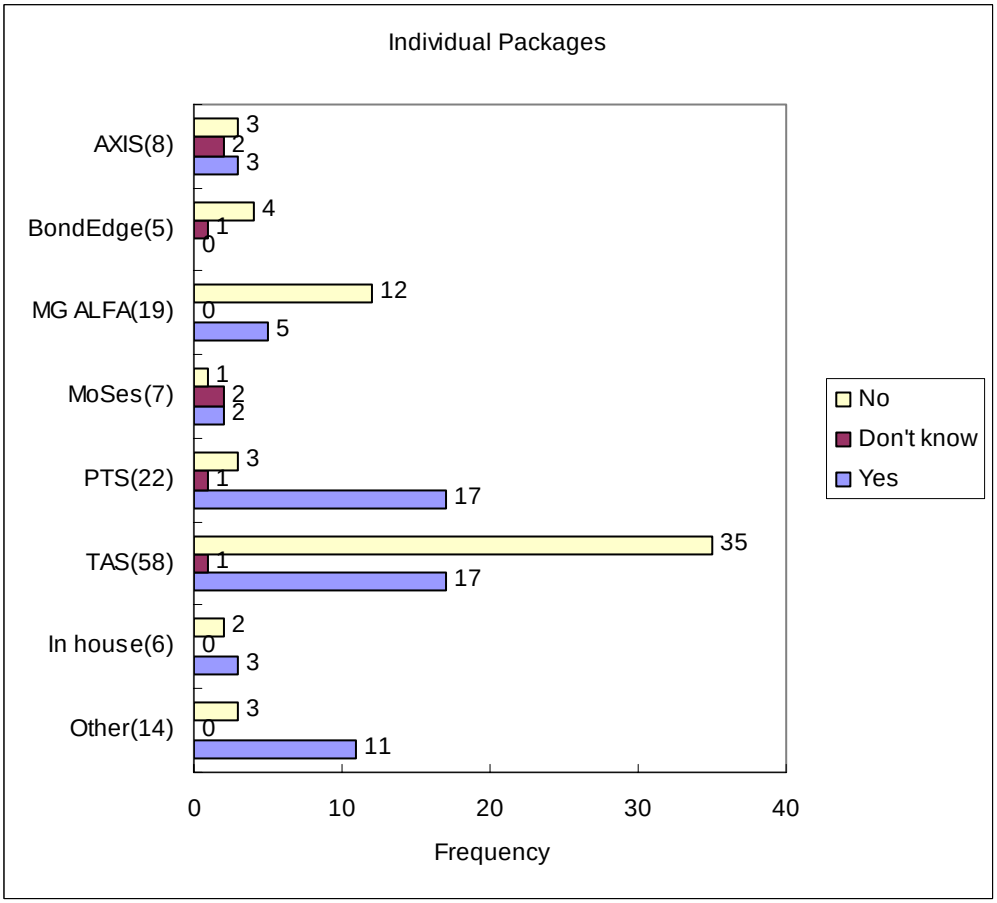

Individual Packages
AXIS(8)
BondEdge(5)
MG ALFA(19)
MoSes(7)
PTS(22)
TAS(58)
In house(6)
Other(14)
0
10
20
30
40
Frequency
Open code
Ability to import data
User defined queries
Seriatim processing options
Tools to value embedded options
Stochastic projections
Scenario generators
Batch processing
Distributed processing
Customized reporting
Ability to export results

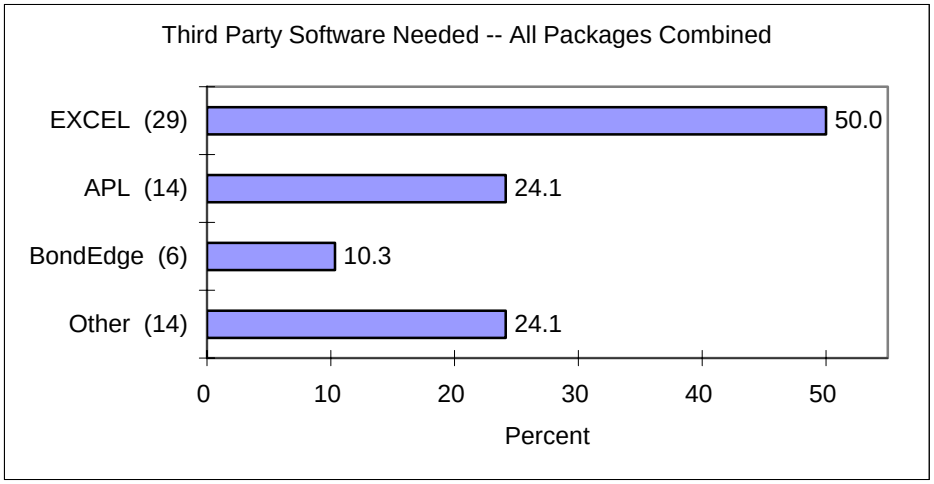
15. Is third party software required (e.g. Excel, APL, etc.)?

	Package one	Package two
No	☐	☐
Don't know	☐	☐
Yes	☐	☐

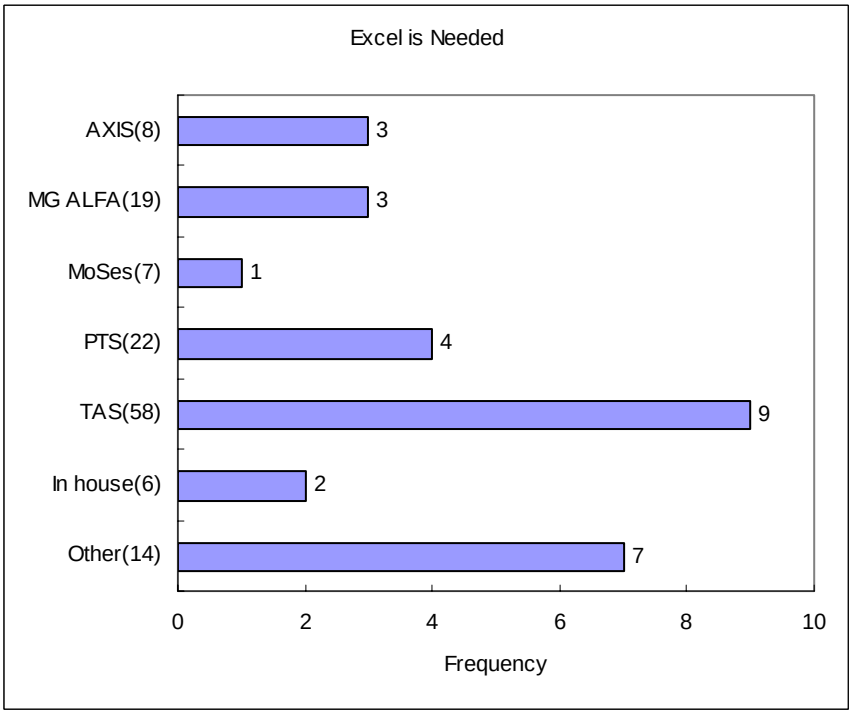
If yes, please specify the software required.







Note: The percentages are based on the total respondents (58) who answered "Yes". The respondent can choose more than one third party software for one CFT package.

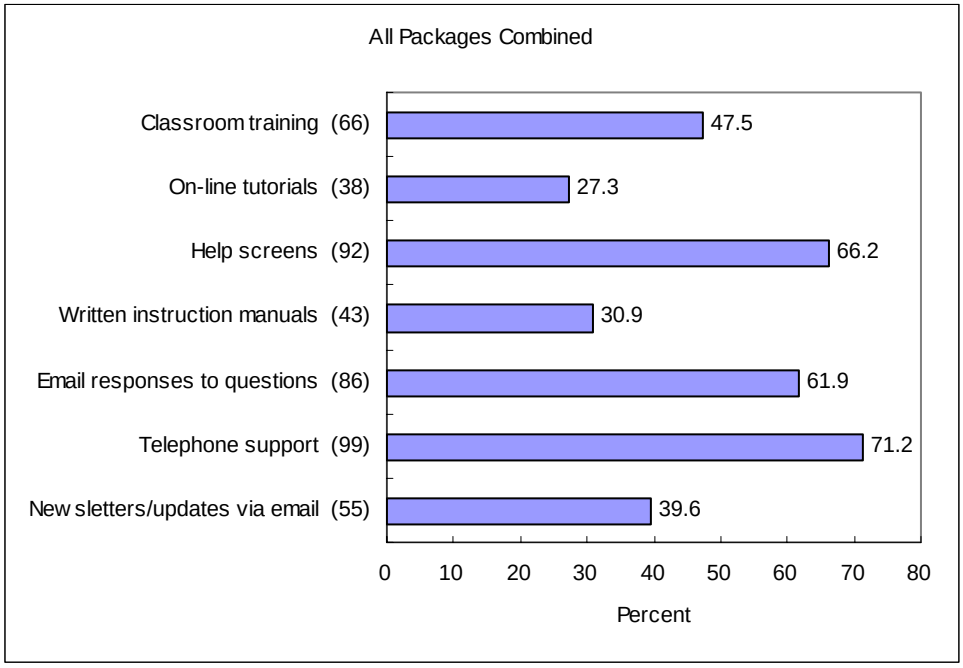


Note: It appears that some respondents interpreted the question differently than it was asked. The question was phrased as what third party software was *required*. Based on the number of responses, it appears that some users were interpreting this question as whether they *used* (whether required or not) third party software.

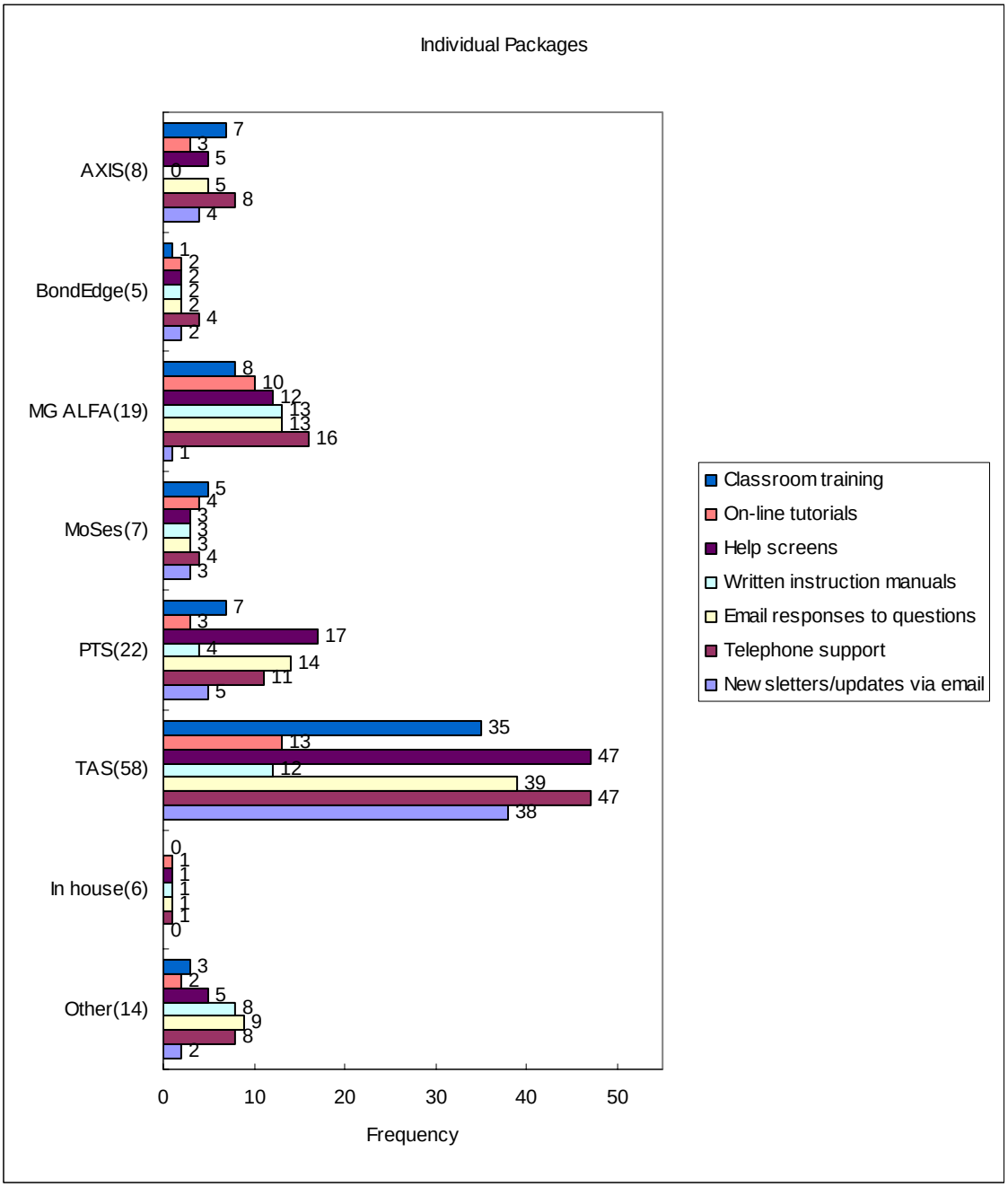
SECTION 3. TRAINING

16. How is training/support provided?

	Package one	Package two
Classroom training	□	□
On-line tutorials	□	□
Help screens	□	□
Written instruction manuals	□	□
Email responses to questions	□	□
Telephone support	□	□
Newsletters/updates via email, internet web sites, or mail	□	□
Don't know	□	□
Other	□	□

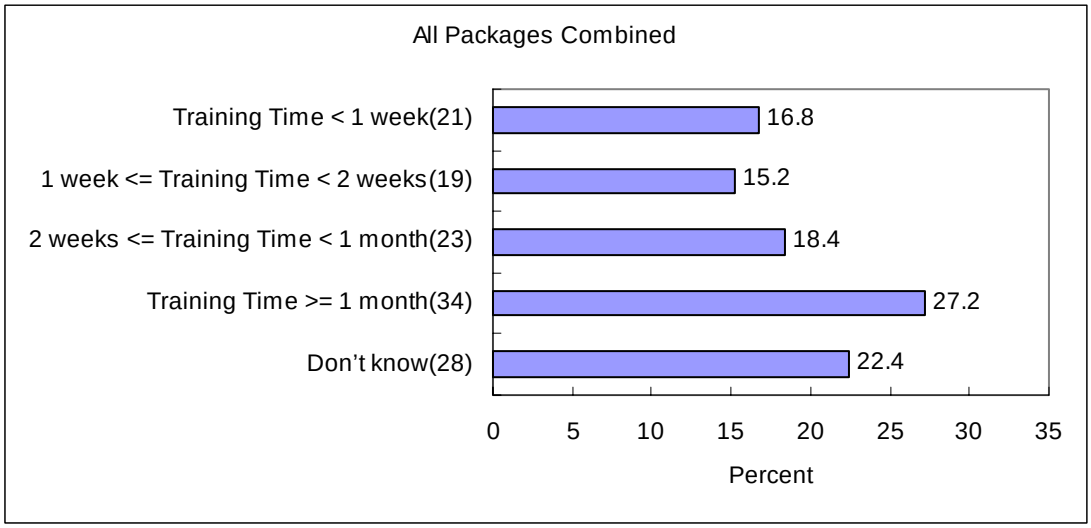


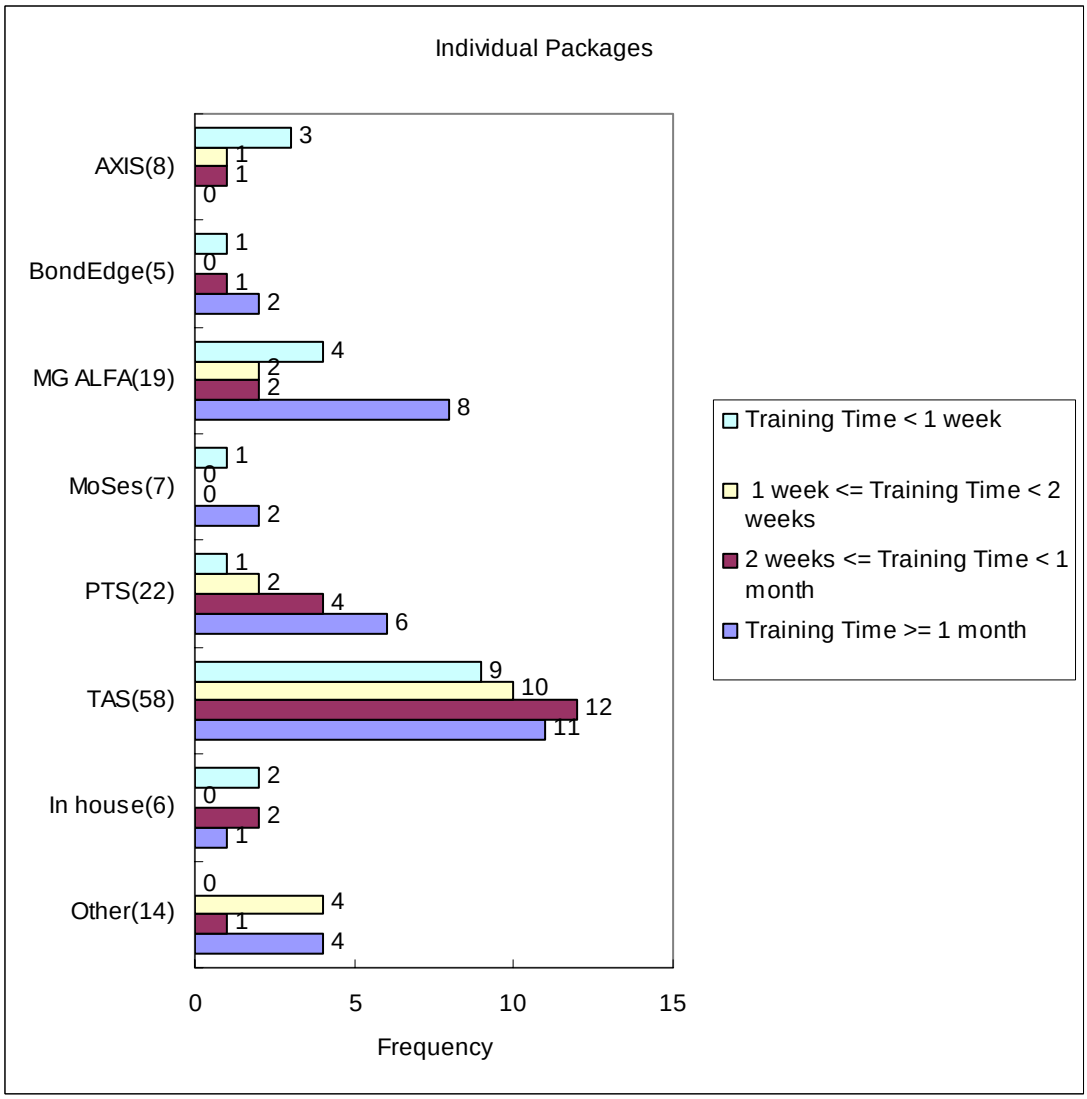
Note: The percentages are based on the total respondents (139), and respondents can be provided more than one support.



17. How much training on the original Cash Flow Testing software package(s) was required before becoming knowledgeable enough to use it (them) for cash flow testing purposes?

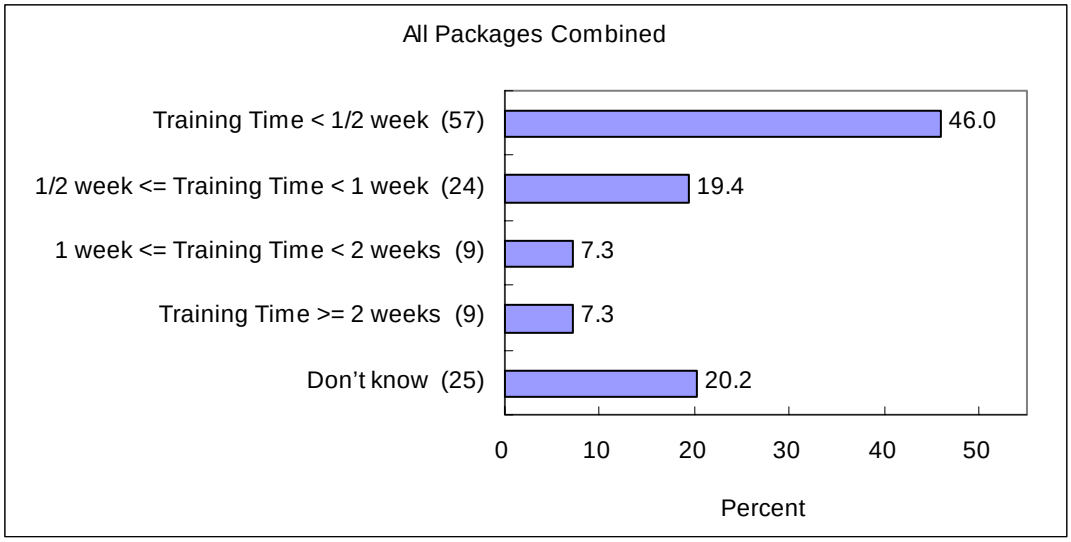
	Package one	Package two
Less than 1 week	☐	☐
Greater than or equal to 1 week but less than two weeks	☐	☐
Greater than or equal to 2 weeks but less than one month	☐	☐
Greater than 1 month	☐	☐
Don't know	☐	☐

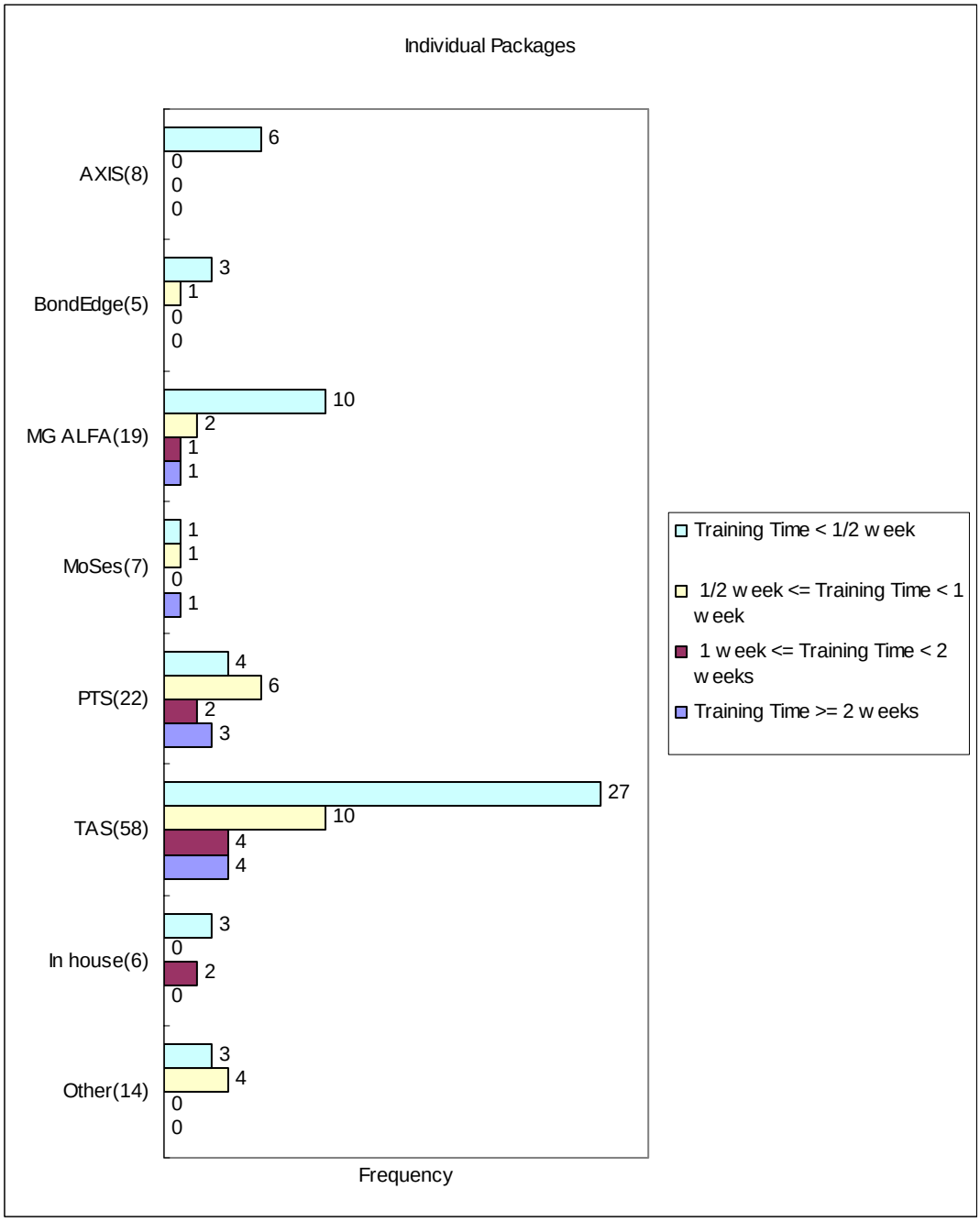

All Packages Combined
Training Time < 1 week(21)
1 week <= Training Time < 2 weeks(19)
2 weeks <= Training Time < 1 month(23)
Training Time >= 1 month(34)
Don't know(28)
16.8
15.2
18.4
27.2
22.4
0
5
10
15
20
25
30
35
Percent


Individual Packages
AXIS(8)
BondEdge(5)
MG ALFA(19)
MoSes(7)
PTS(22)
TAS(58)
In house(6)
Other(14)
3
1
1
0
1
0
1
2
4
2
2
8
1
0
0
2
1
2
4
6
9
10
12
11
2
0
2
1
0
4
1
4
0
5
10
15
Frequency
Training Time < 1 week
1 week <= Training Time < 2 weeks
2 weeks <= Training Time < 1 month
Training Time >= 1 month

18. Similarly, how much training is required on a typical update/new release before becoming knowledgeable enough to use it for cash flow testing purposes?

	Package one	Package two
Less than ½ week	☐	☐
Greater than or equal to 1/2 week but less than 1 week	☐	☐
Greater than or equal to 1 week but less than 2 weeks	☐	☐
Greater than 2 weeks	☐	☐
Don't know	☐	☐



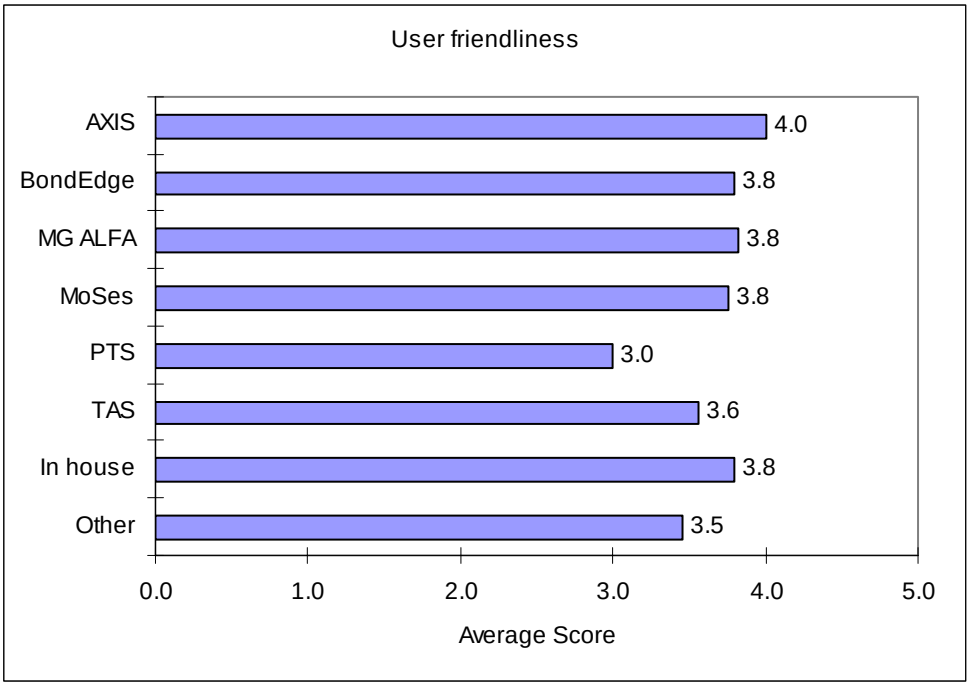

Individual Packages
AXIS(8)
6
0
0
0
BondEdge(5)
3
1
0
0
MG ALFA(19)
10
2
1
1
MoSes(7)
1
1
0
1
PTS(22)
4
6
2
3
TAS(58)
27
10
4
4
In house(6)
3
0
2
0
Other(14)
3
4
0
0
Frequency
Training Time < 1/2 week
1/2 week <= Training Time < 1 week
1 week <= Training Time < 2 weeks
Training Time >= 2 weeks

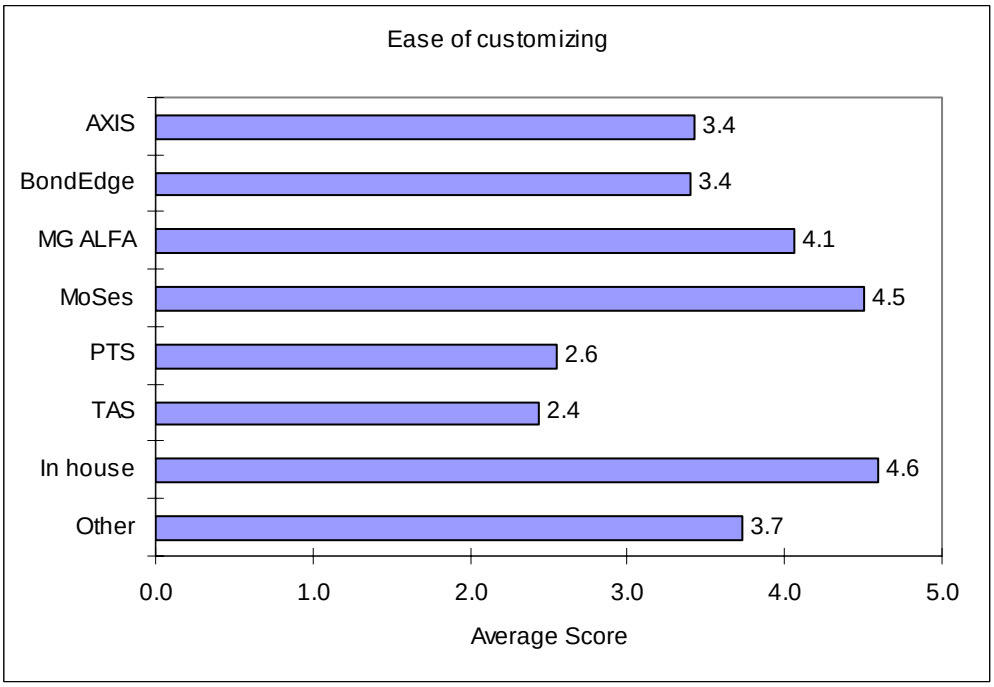
SECTION 4. SOFTWARE AND VENDOR SATISFACTION RATES

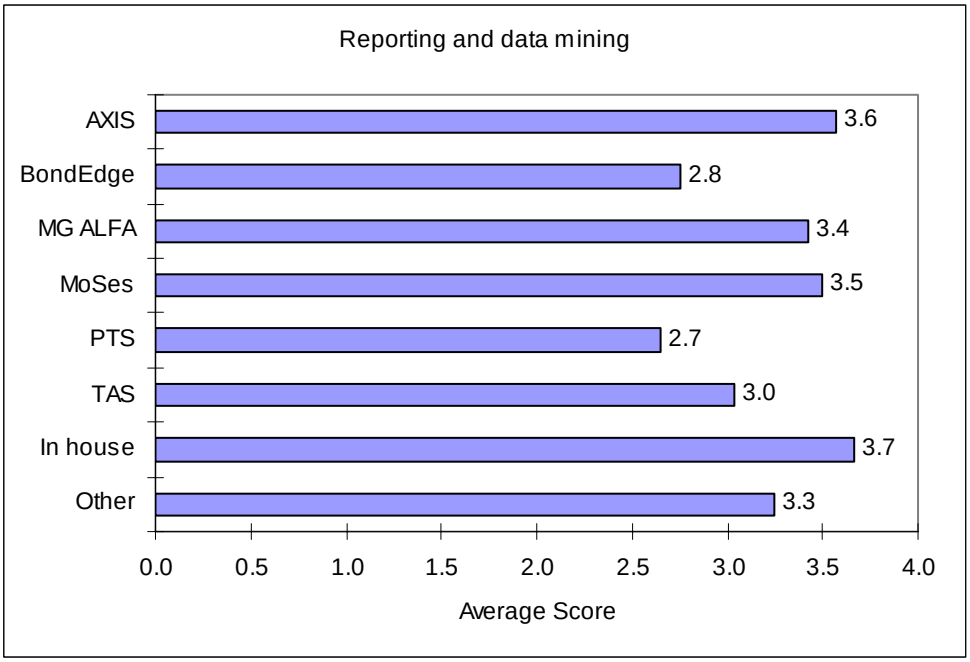
19. Please rate the performance of the individual packages for the following questions using

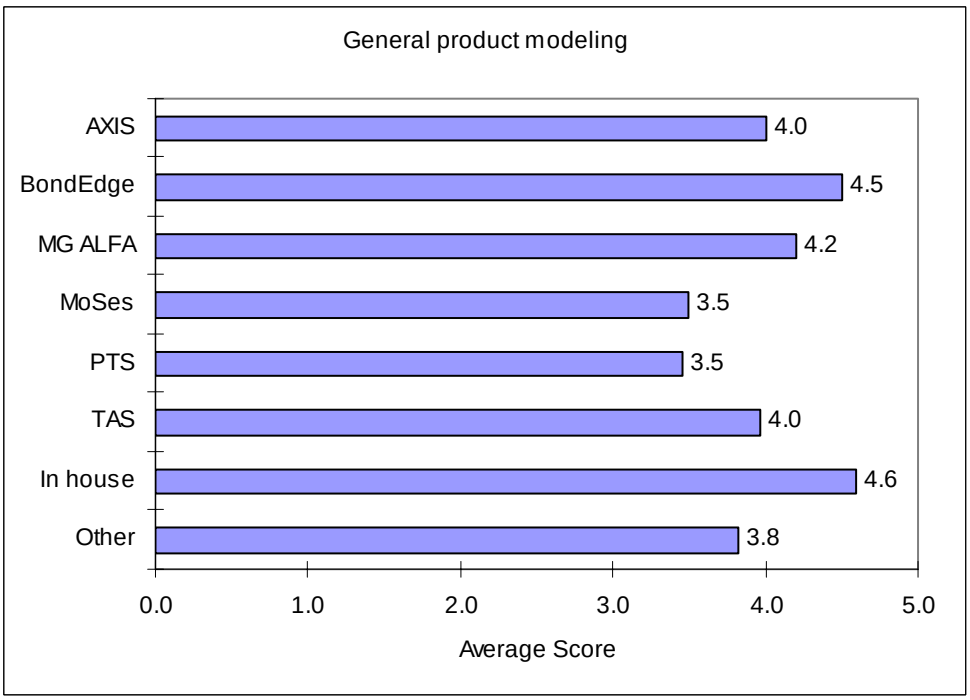
1: very dissatisfied ----- 5: very satisfied, NA: Not Applicable

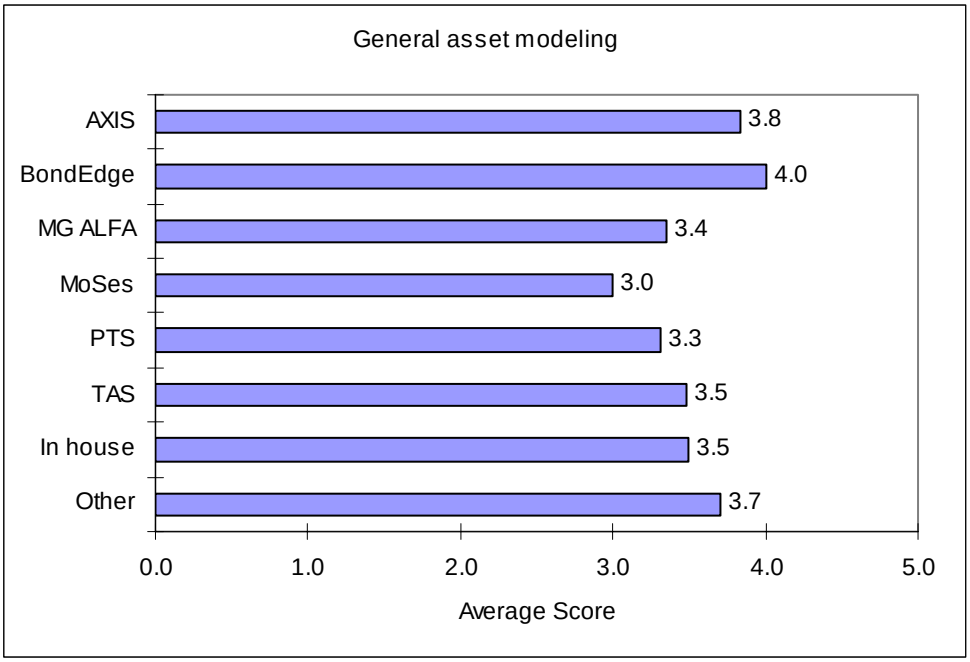
	1	2	3	4	5	NA
User friendliness	□	□	□	□	□	□
Ease of customizing	□	□	□	□	□	□
Reporting and data mining	□	□	□	□	□	□
General product modeling	□	□	□	□	□	□
General asset modeling	□	□	□	□	□	□
Ability to integrate with pricing	□	□	□	□	□	□
Keeping up with regulatory change	□	□	□	□	□	□
Ability to integrate with other software	□	□	□	□	□	□
Processing speed	□	□	□	□	□	□
Reliability	□	□	□	□	□	□
Ease of repairing the system	□	□	□	□	□	□
Data verification	□	□	□	□	□	□
Security features	□	□	□	□	□	□
Support startup	□	□	□	□	□	□
Written materials	□	□	□	□	□	□
Overall satisfaction	□	□	□	□	□	□

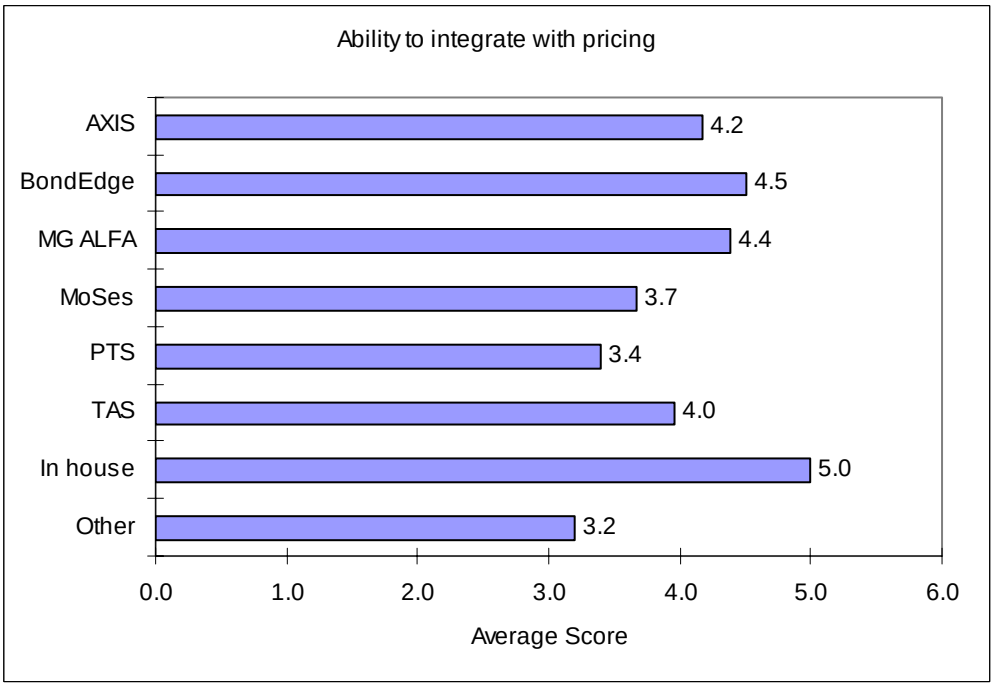

User friendliness
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.0
3.8
3.8
3.8
3.0
3.6
3.8
3.5
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

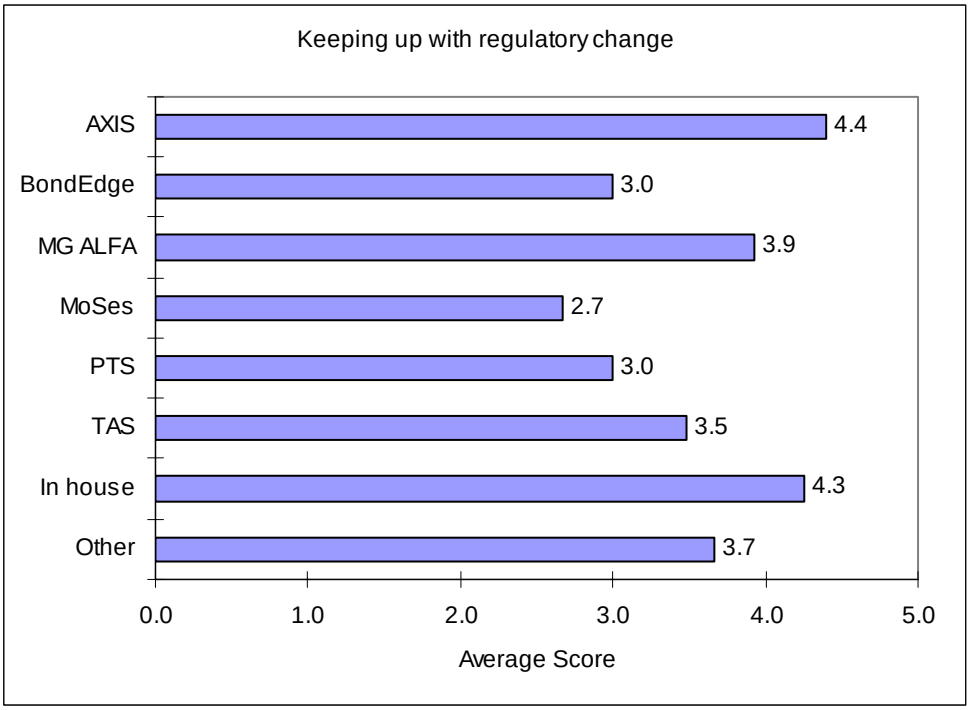

Ease of customizing
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.4
3.4
4.1
4.5
2.6
2.4
4.6
3.7
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

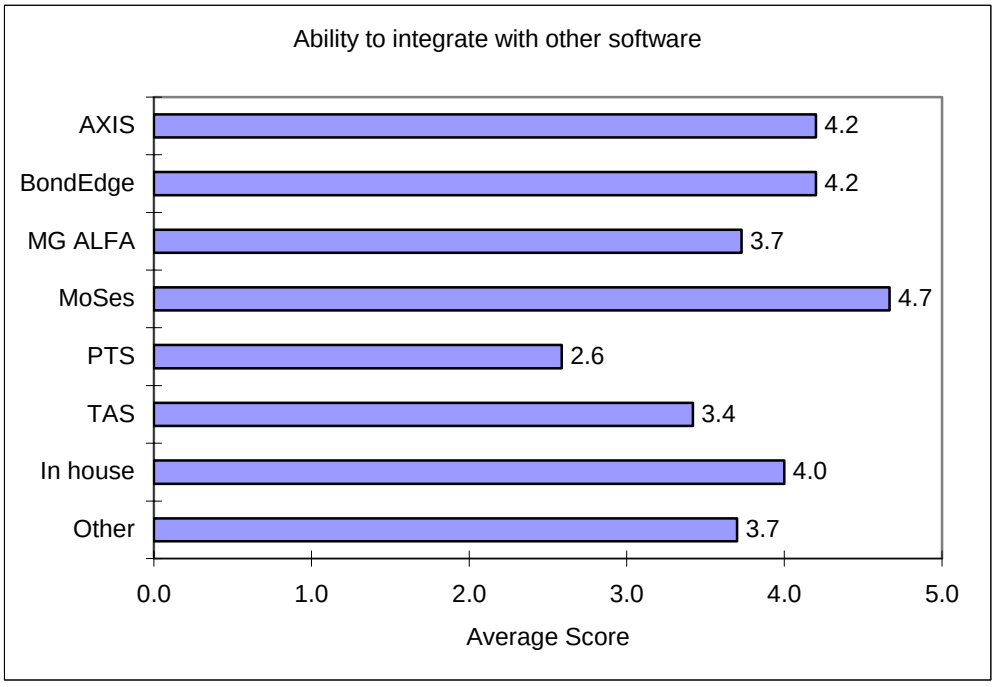

Reporting and data mining
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.6
2.8
3.4
3.5
2.7
3.0
3.7
3.3
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Average Score

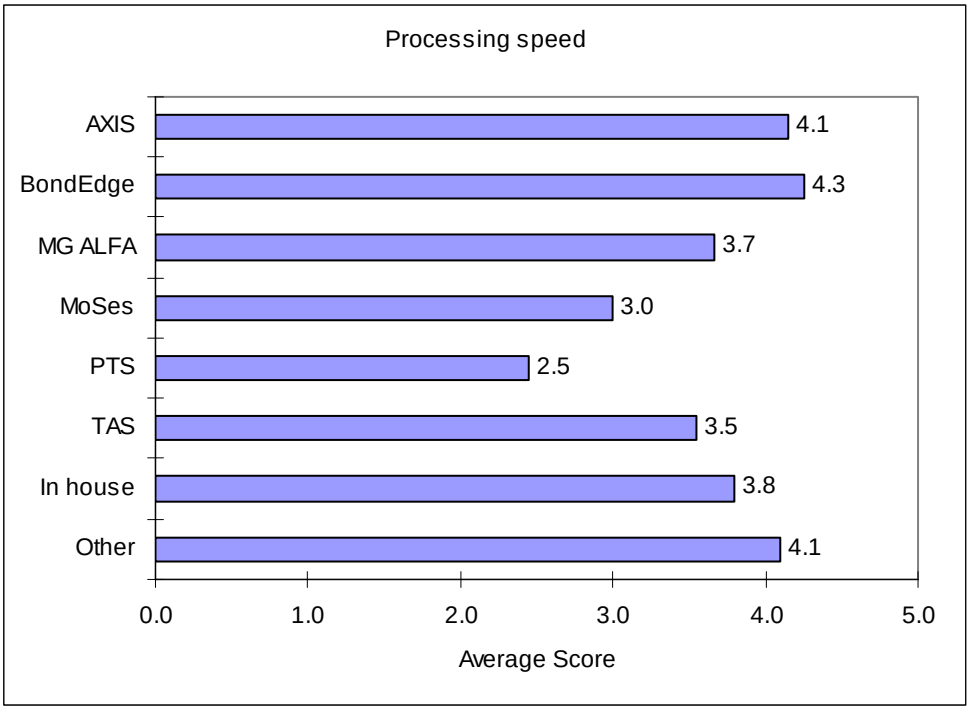

General product modeling
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.0
4.5
4.2
3.5
3.5
4.0
4.6
3.8
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

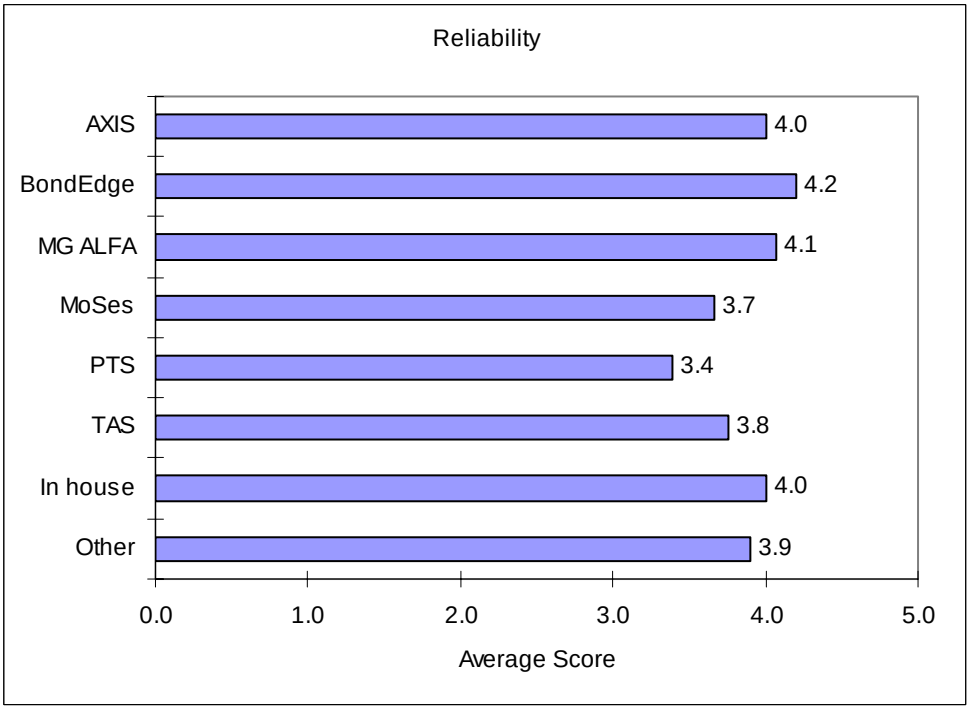

General asset modeling
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.8
4.0
3.4
3.0
3.3
3.5
3.5
3.7
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

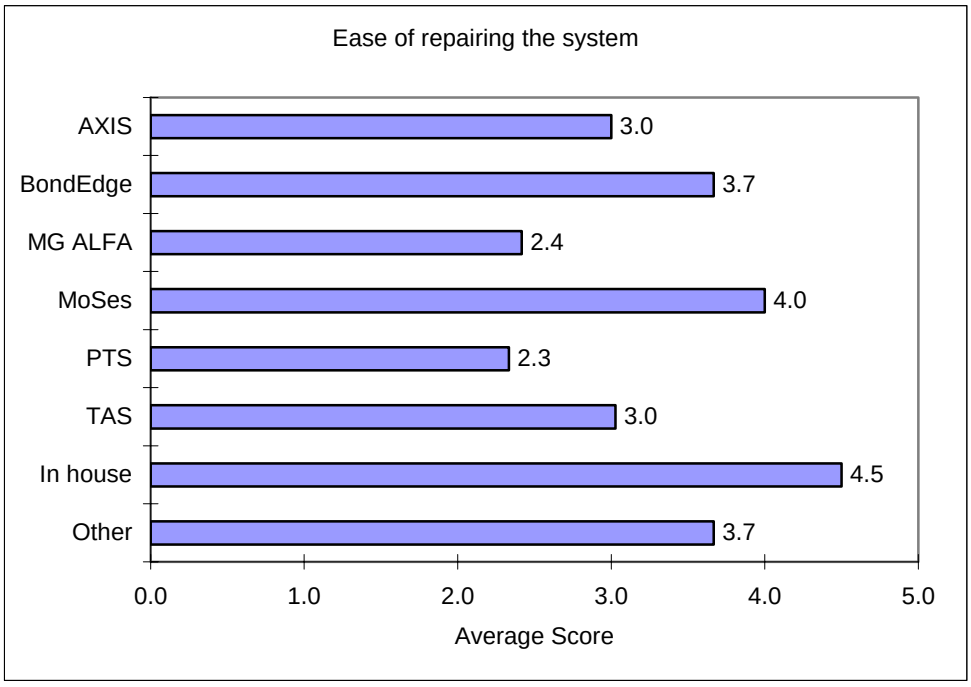

Ability to integrate with pricing
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.2
4.5
4.4
3.7
3.4
4.0
5.0
3.2
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Average Score

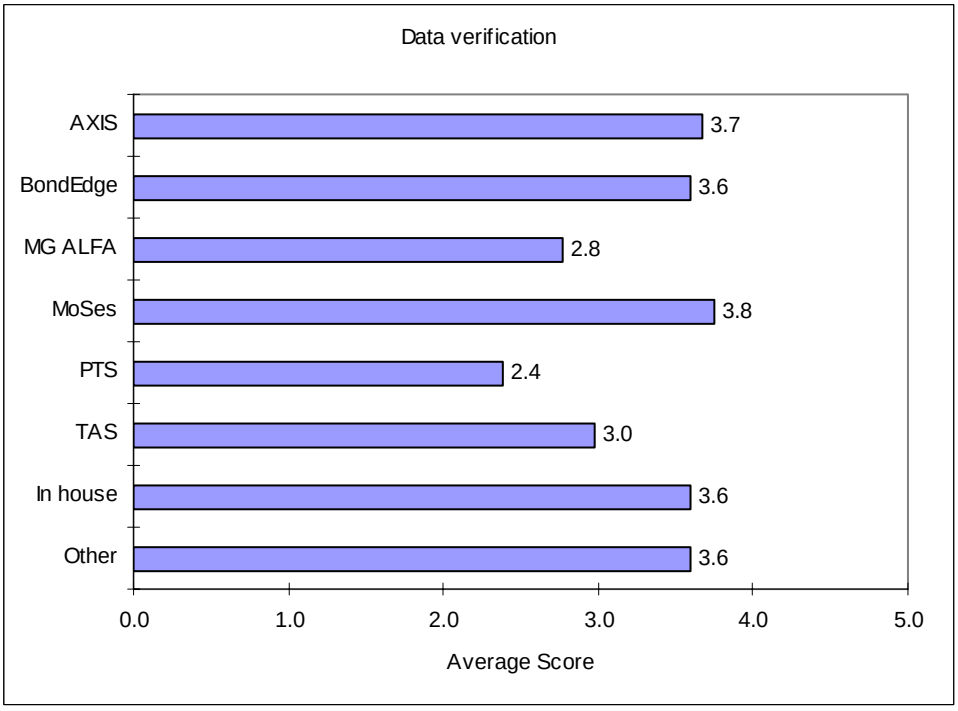

Keeping up with regulatory change
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.4
3.0
3.9
2.7
3.0
3.5
4.3
3.7
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

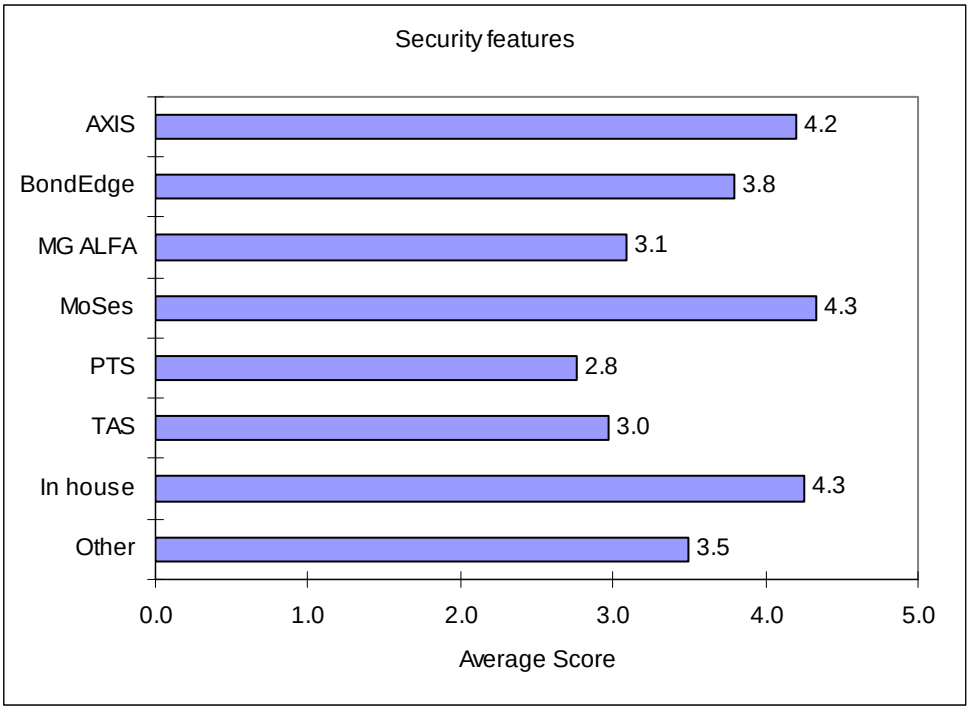

Ability to integrate with other software
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.2
4.2
3.7
4.7
2.6
3.4
4.0
3.7
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

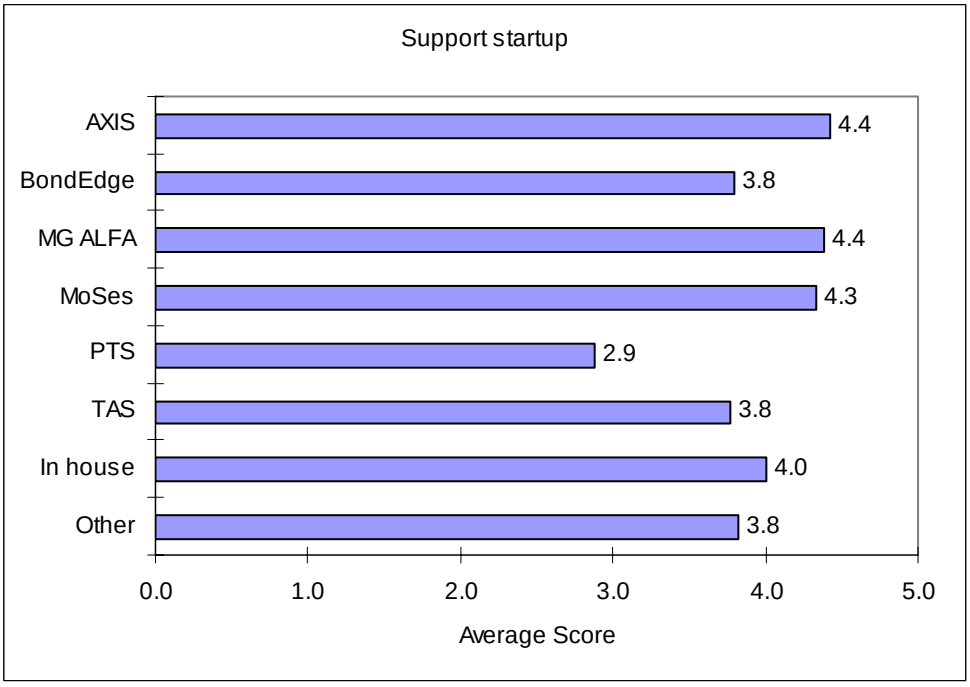

Processing speed
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.1
4.3
3.7
3.0
2.5
3.5
3.8
4.1
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

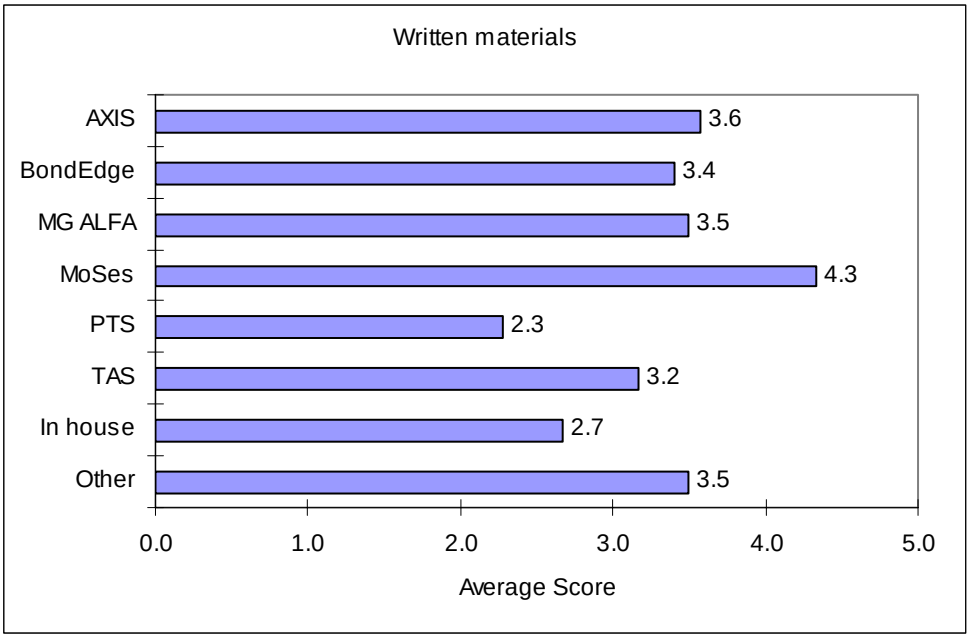

Reliability
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.0
4.2
4.1
3.7
3.4
3.8
4.0
3.9
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

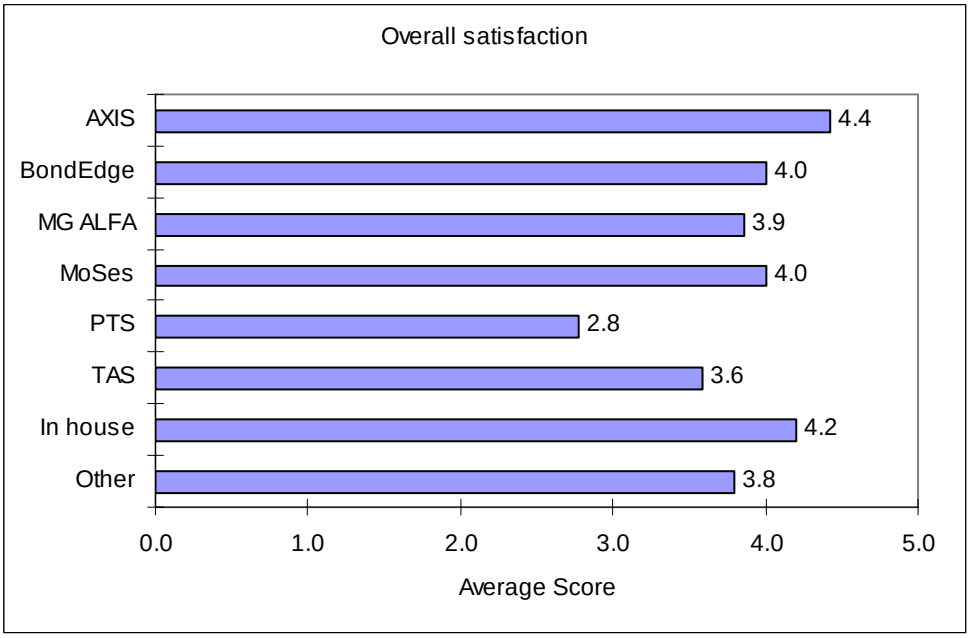

Ease of repairing the system
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.0
3.7
2.4
4.0
2.3
3.0
4.5
3.7
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

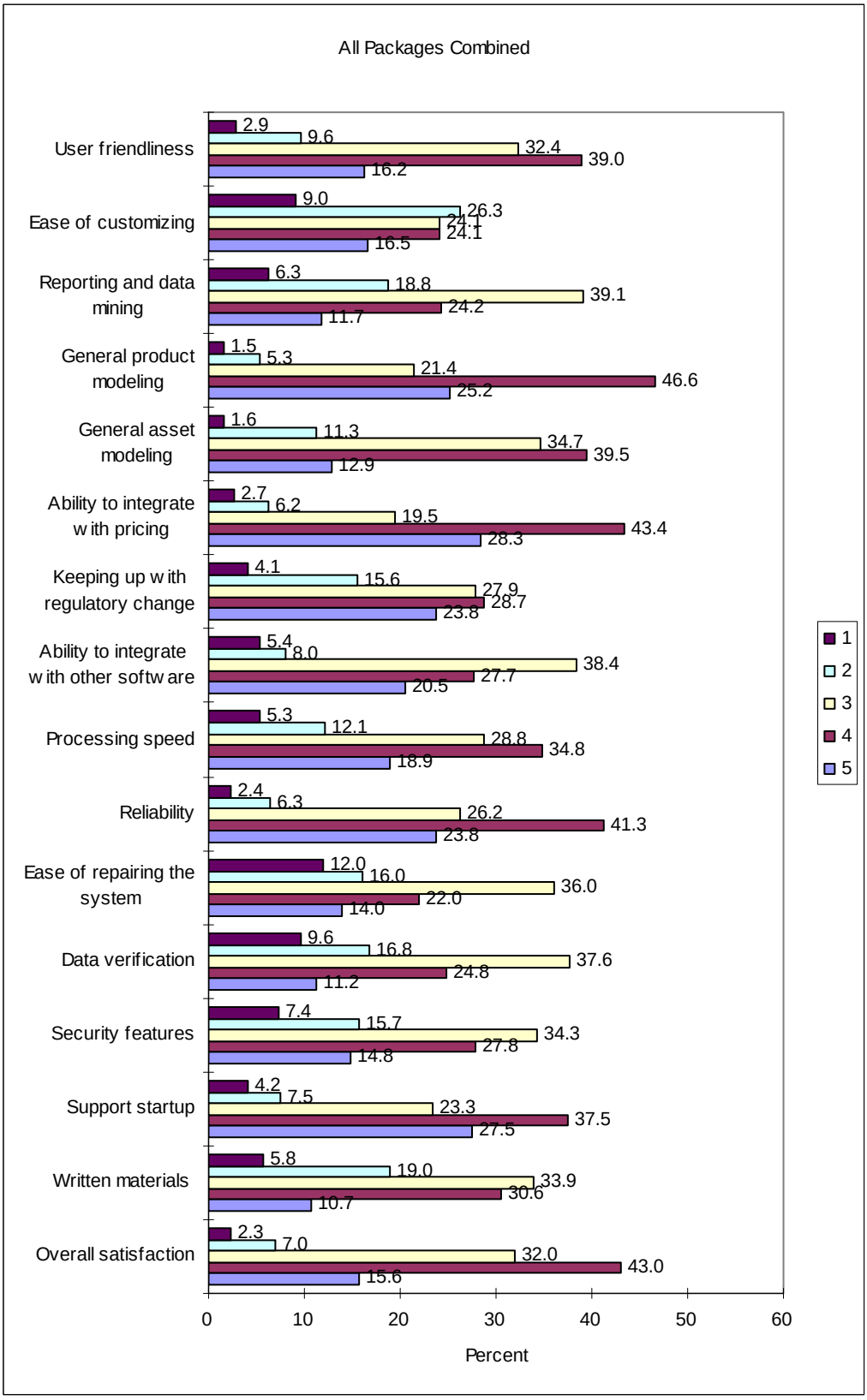

Data verification
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.7
3.6
2.8
3.8
2.4
3.0
3.6
3.6
0.0
1.0
2.0
3.0
4.0
5.0
Average Score


Security features
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.2
3.8
3.1
4.3
2.8
3.0
4.3
3.5
0.0
1.0
2.0
3.0
4.0
5.0
Average Score


Support startup
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.4
3.8
4.4
4.3
2.9
3.8
4.0
3.8
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

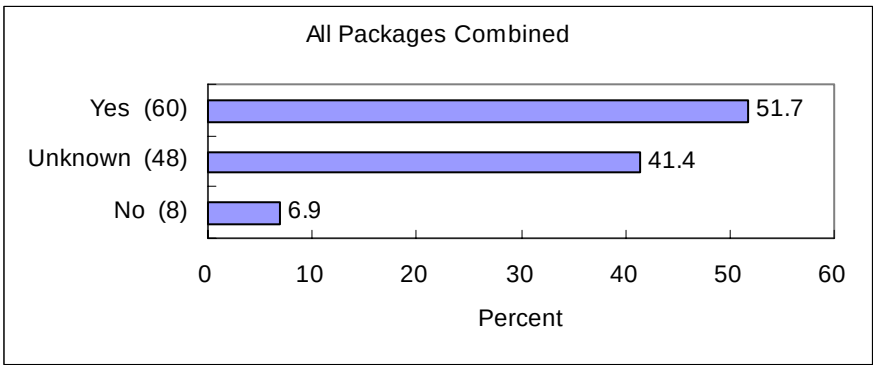

Written materials
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
3.6
3.4
3.5
4.3
2.3
3.2
2.7
3.5
0.0
1.0
2.0
3.0
4.0
5.0
Average Score

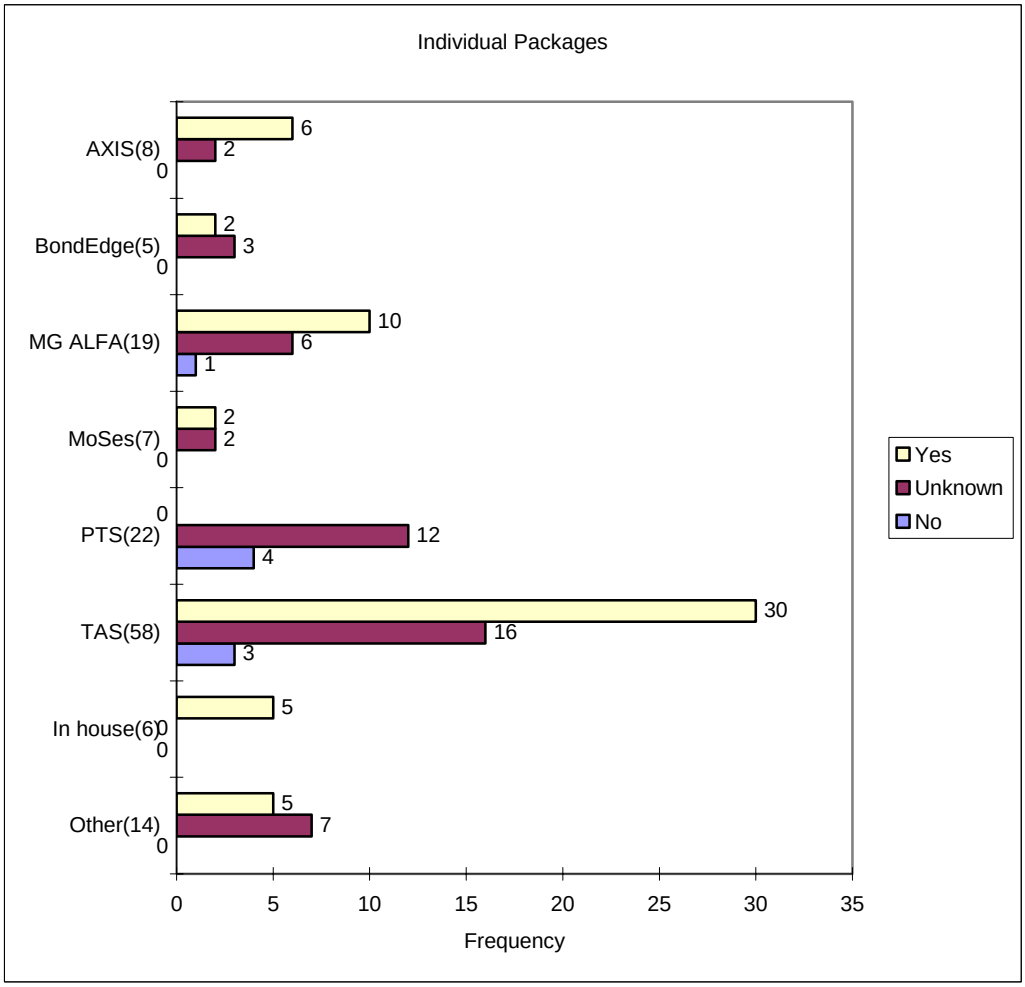

Overall satisfaction
AXIS
BondEdge
MG ALFA
MoSes
PTS
TAS
In house
Other
4.4
4.0
3.9
4.0
2.8
3.6
4.2
3.8
0.0
1.0
2.0
3.0
4.0
5.0
Average Score


All Packages Combined
User friendliness
2.9
9.6
32.4
39.0
16.2
Ease of customizing
9.0
26.3
24.1
24.1
16.5
Reporting and data mining
6.3
18.8
39.1
24.2
11.7
General product modeling
1.5
5.3
21.4
46.6
25.2
General asset modeling
1.6
11.3
34.7
39.5
12.9
Ability to integrate with pricing
2.7
6.2
19.5
43.4
28.3
Keeping up with regulatory change
4.1
15.6
27.9
28.7
23.8
Ability to integrate with other software
5.4
8.0
38.4
27.7
20.5
Processing speed
5.3
12.1
28.8
34.8
18.9
Reliability
2.4
6.3
26.2
41.3
23.8
Ease of repairing the system
12.0
16.0
36.0
22.0
14.0
Data verification
9.6
16.8
37.6
24.8
11.2
Security features
7.4
15.7
34.3
27.8
14.8
Support startup
4.2
7.5
23.3
37.5
27.5
Written materials
5.8
19.0
33.9
30.6
10.7
Overall satisfaction
2.3
7.0
32.0
43.0
15.6
1
2
3
4
5
0
10
20
30
40
50
60
Percent

20. Are you satisfied with the vendor's plans for the future? (*Single*)

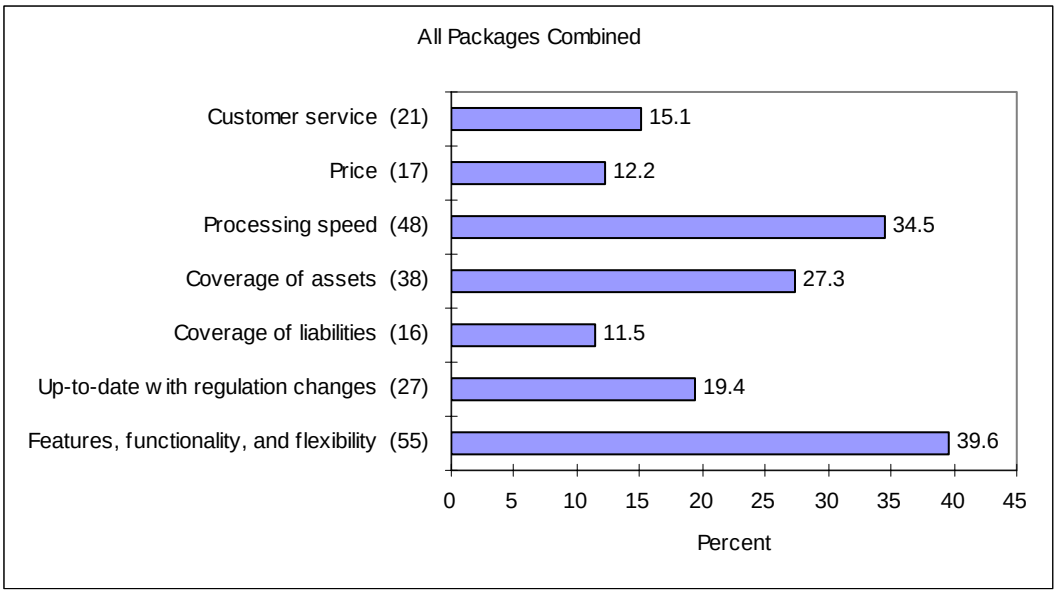
	Package one	Package two
Yes	☐	☐
Unknown	☐	☐
No. Please explain	☐	☐





21. Please select up to three of the following improvements that you would most like to see in the Cash Flow Testing software package(s) currently being used.

	Package one	Package two
Customer service	☐	☐
Price	☐	☐
Processing speed	☐	☐
Coverage of assets	☐	☐
Coverage of liabilities	☐	☐
Up-to-date with regulation changes	☐	☐
Features, functionality, and flexibility	☐	☐
Other, please specify	☐	☐

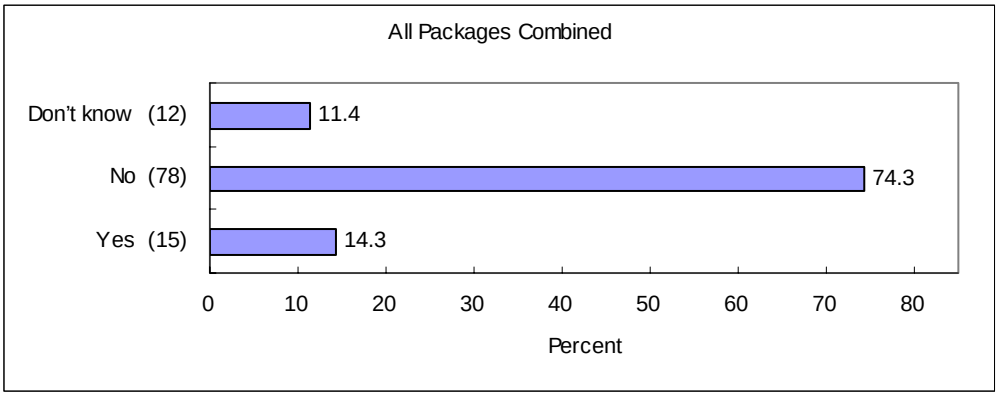


Note: The percentages are based on the total respondents (139), and respondents can choose up to 3 improvements.

22. Are you considering changing vendor(s) within 1 year? (Single answers)

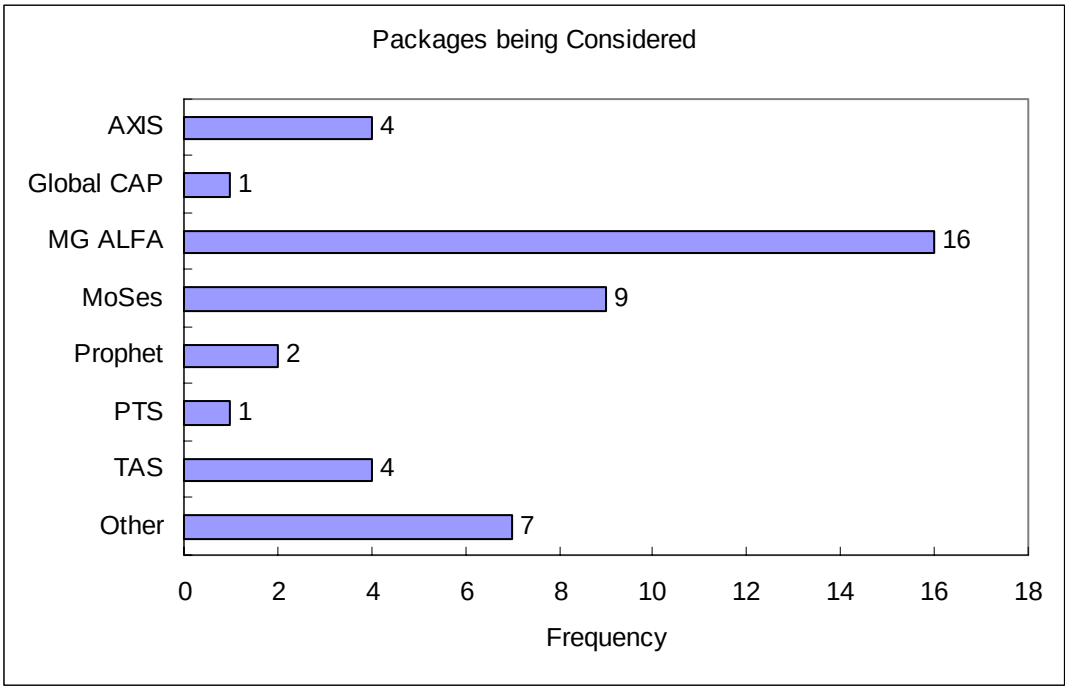
	Package one	Package two
Don't know (go to 24)	☐	☐
No (go to 24)	☐	☐
Yes, please comment (go to 23)	☐	☐

What advantages would you hope to achieve by switching software?



23. What product(s) would you consider purchasing? (Multiple answers; go to 24)

- ☐ AXIS – GGY Inc.
- ☐ Classic Solutions Risk Management – MoSes
- ☐ Deloitte Touche – Prophet
- ☐ Lewis & Ellis – LEAPPS®
- ☐ Milliman MG ALFA
- ☐ SS&C Technologies – PTS
- ☐ Tillinghast-Towers Perrin – TAS®
- ☐ Tillinghast-Towers Perrin – Global CAP:Link™
- ☐ Winkelvoss Technologies – ProVal
- ☐ Other, please specify



Frequency: (Blank cells have 0 respondents)

Packages Currently being used	Packages Being Considered							
	AXIS	MoSes	Prophet	MG ALFA	PTS	TAS	Global CAP	Other
AXIS								
BondEdge								
MG ALFA						1		1
MoSes								
PTS	3	3		7		1		2
TAS	1	6	2	7	1		1	4
In house				1		2		
Other				1				

24. Are there other important issues regarding Cash Flow Testing software on which you would like to comment?

The following are summarized general comments from the respondents.

- Respondents would like to have one system or integrated package for regular valuation, financial reporting, pricing, ALM, forecasting, experience analysis, earnings analysis, etc.
- Respondents have concerns about the ability of the current software packages to adequately handle equity-indexed annuities.