FULL STACK MODELLER

MODELLING THE FUTURE

2021 Global
# Financial Modelling
Profession Survey

About FSM

Full Stack Modeller is an entirely new kind of modelling training.

It's a personalised journey from Excel basics, through to advanced financial modelling, and the full stack of modelling related technologies like Power BI, Tableau, review tools and modular model build tools.

For what you would pay elsewhere for a 2-day classroom course with one instructor you will receive:

- One year of Full Stack Modeller membership
- Access to a thriving network of financial modellers from all over the world
- A personalised learning plan based on a detailed assessment of your current skill set
- Regular modelling challenges and case studies
- Frequent masterclasses with guest instructors. You'll learn from many of the best modelling instructors globally.
- Technology updates with live sessions and guidance from modelling tech providers & experts
- FMI exam preparation support
- All delivered via our purpose-built app available on web, iOS and Android.

About
FSM
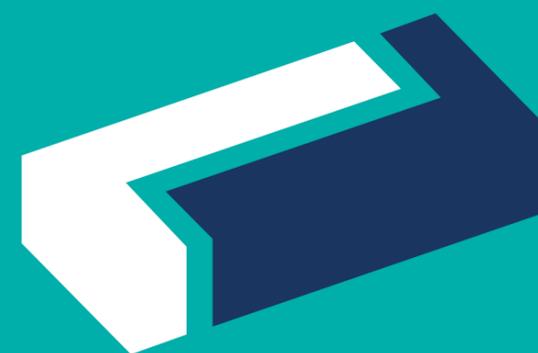
"If someone was considering joining the Full Stack community I would definitely recommend it. I would suggest that they really throw themselves at it; not just in the courses, but in the community as well because that's what really differentiates FSM from other courses."

David, England

"It's more of a tribe than a learning course. It really is the full package."

Wikus, South Africa

Find out more at
fullstackmodeller.com
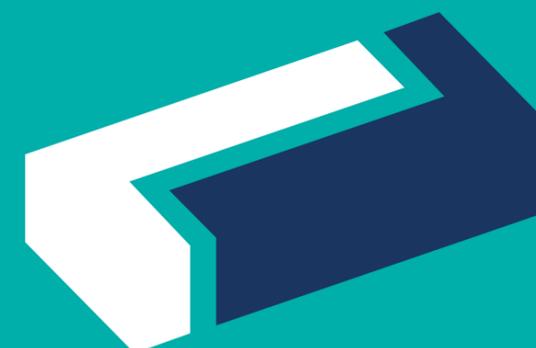
Foreword

by Danielle Stein Fairhurst

Having been part of the financial modelling profession for many years, I am always delighted to observe and be involved with some of the industry innovations and developments of recent years.

Full Stack Modeller has been a breath of fresh air in the industry and I have been looking forward to seeing the results of this recent survey. Working in finance, we think we may have a feel for what is happening around us but, as data-based specialists, we know that there is nothing quite like surveying a representative group of professionals to find out exactly where our industry is headed. I hope you find the report as interesting as I did; some of the findings were to be expected, and others were a surprise.

When I started out, the concept of modelling was fairly niche; building financial models was just a part of your job and not seen as a role in and of itself. With the increase of financial modelling qualifications, however, it seems that fewer modellers are self-taught, and the financial modelling profession is gaining traction as an industry in its own right. Its reputation has sometimes suffered by modelling being seen as a low-valued profession, but this appears to be improving, as more modellers now say they feel their work is highly valued by others, compared to the last survey.

For a long time, I've been concerned about the lack of female participation in financial modelling events, and the industry in general. Before seeing the results of the survey, I had suspicions about the gender pay gap, but it is dismaying to see it so clearly crystallised in this report. I recently started a "Women in Financial Modelling" online meetup community to support and encourage

Foreword

women to become more involved in financial modelling by speaking publicly, competing in championship events or gaining a qualification. In the short time it has been operating, it has become a thriving community. I sincerely believe that with increased skills, involvement and confidence the salaries of female financial modellers will also increase.

I've always believed that having good financial modelling in Excel skills will always stand you in good stead throughout the course of your finance career, and this can be seen by the fact that financial modellers can be found in almost every industry and every corner of the earth. It is exciting to think that, as a financial modeller, your skills are widely applicable to industry and location (after quarantine of course).

The travel restrictions placed upon us globally by the COVID-19 pandemic have increased opportunities for collaboration within the industry. Modellers who have been working together and collaborating globally for years are finding working remotely has become mainstream out of necessity. I believe that through discussions and community, together we can work to increase the profile of financial modelling as an industry in its own right and improve the profiles, demand and employment opportunities for financial modellers everywhere.

I'm very much looking forward to what 2021 will bring!

Danielle Stein Fairhurst
is the principal consultant
of Sydney-based consultancy
Plum Solutions.

She is the author of
"Using Excel for Business
and Financial Modelling"
(Wiley Finance, 3rd edition)
and "Financial Modeling in
Excel for Dummies".

Key Findings

Financial modelling is truly a global profession.

The survey had submissions from 94 countries.

More modellers consider the profession to be dynamic & innovative.

92% in 2021, compared to 84% in 2019.

Many people have now had long careers as financial modellers.

More than 20% of respondents have more than 20 years of experience.

Our work adds real value, and modelling skills are career enhancing.

88% of modellers say that their work is highly valued by others.

90% say that their career has been enhanced by their modelling skills.

There is a material gender pay gap.

The gap is smallest among professional services firms.

Most modellers consider standards important.

The majority of organisations still do not use one.

Introduction

By Kenny Whitelaw-Jones
Co-founder, Full Stack Modeller

I've been a professional financial modeller for more than 20 years. And so I come burdened with my own set of biases and expectations. One of the reasons we run this survey is to test what we think we know about financial modelling, against what the data tells us.

I'm grateful to all 951 modellers who took the time to complete the survey; the data tells an interesting story.

More than a quarter of modellers do not understand the logic in the models they use.

Modellers' number one frustration is models which are overly complex or difficult to review.

Nearly half of modellers have made errors not picked up by internal review, and a similar number have no such review process at all.

Nearly 40% report that their management does not have an appreciation of the risks related to financial modelling.

We already knew that women are woefully under-represented among financial modellers. What we didn't know so clearly was just how much less women in our profession are paid than men.
Women seem to leave the profession after just a few years.

It seems we still have some way to go in the professionalisation of financial modelling.

Introduction

And yet there are also reasons to be optimistic.

Modellers are aware of the lack of skills on their teams. Many are frustrated with the lack of standards in the profession and with how time-consuming and manual the modelling process is. Many modellers are looking for better, more joined up training programmes. With only 24% regularly using tools other than excel, there is enormous scope for growth among new tools to reduce risk and speed up the process. More of us are obtaining professional certifications than ever before. Fewer modellers are self-taught than we used to be.

Having experienced all of these frustrations myself through my career, I'm on a personal mission to help modellers professionalise through better training and useful software tools.

I agree with the 92% of you who think that modelling is a dynamic and innovative profession. I still believe there's never been a more exciting time to be a financial modeller.

I'm proud and grateful to be part of this community,

Kenny & the Full Stack Modeller team.

Survey Demographics

Financial modelling is a truly global, cross-sectoral profession with many different applications.

951
Professionals

94
Countries

34% Europe **22%** Asia **22%** America **12%** Africa **10%** Australia

Survey Demographics

Where Financial Modellers Work

| Category	Percentage
Professional Services	29%
Industry	25%
Other	18%
Banking	11%
Investment Fund	9%
Infra/Power Developer	8%

Gender
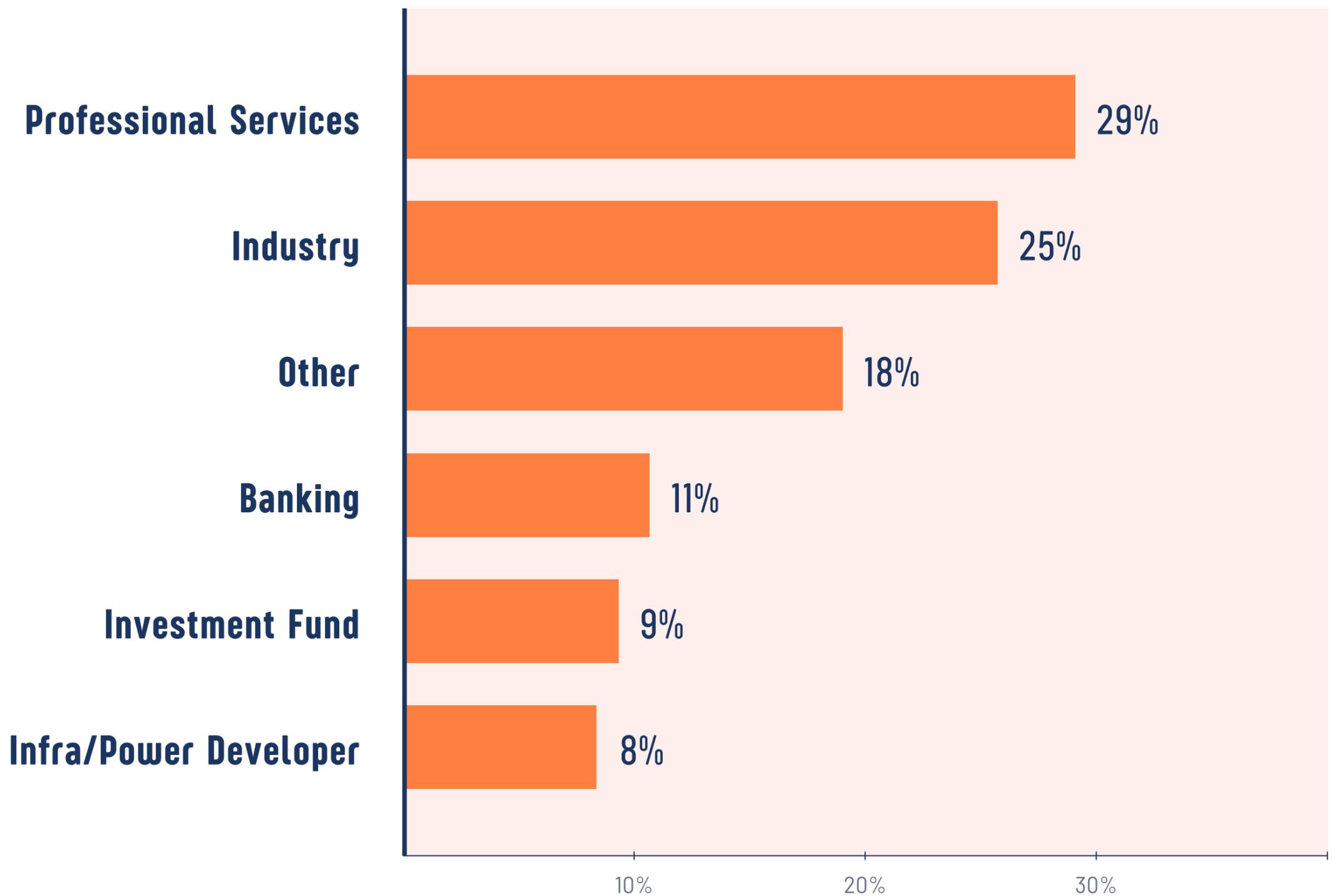
Financial modelling continues to suffer from an under-representation of women.
14% of respondents were women. Unchanged from 2019.

Only India and Germany had more than 20% female respondents.

It seems that more women are entering the profession, but the proportion declines over time.

Women as % of Modellers, by Years of Experience

| | <2 Years | 2-5 Years | 6-10 Years | 11-15 Years | 16-20 Years | >20 Years |

Gender
Pay Gap

There is a material pay gap between men and women.

Average Salary (US$) by Level of Experience
(based on mid-point in salary range)

140K	
120K	> 20 Years / 16-20 Years
100K	
80K	11-15 Years / 6-10 Years
60K	2-4 Years
40K	< 2 Years
20K	

Female   Male
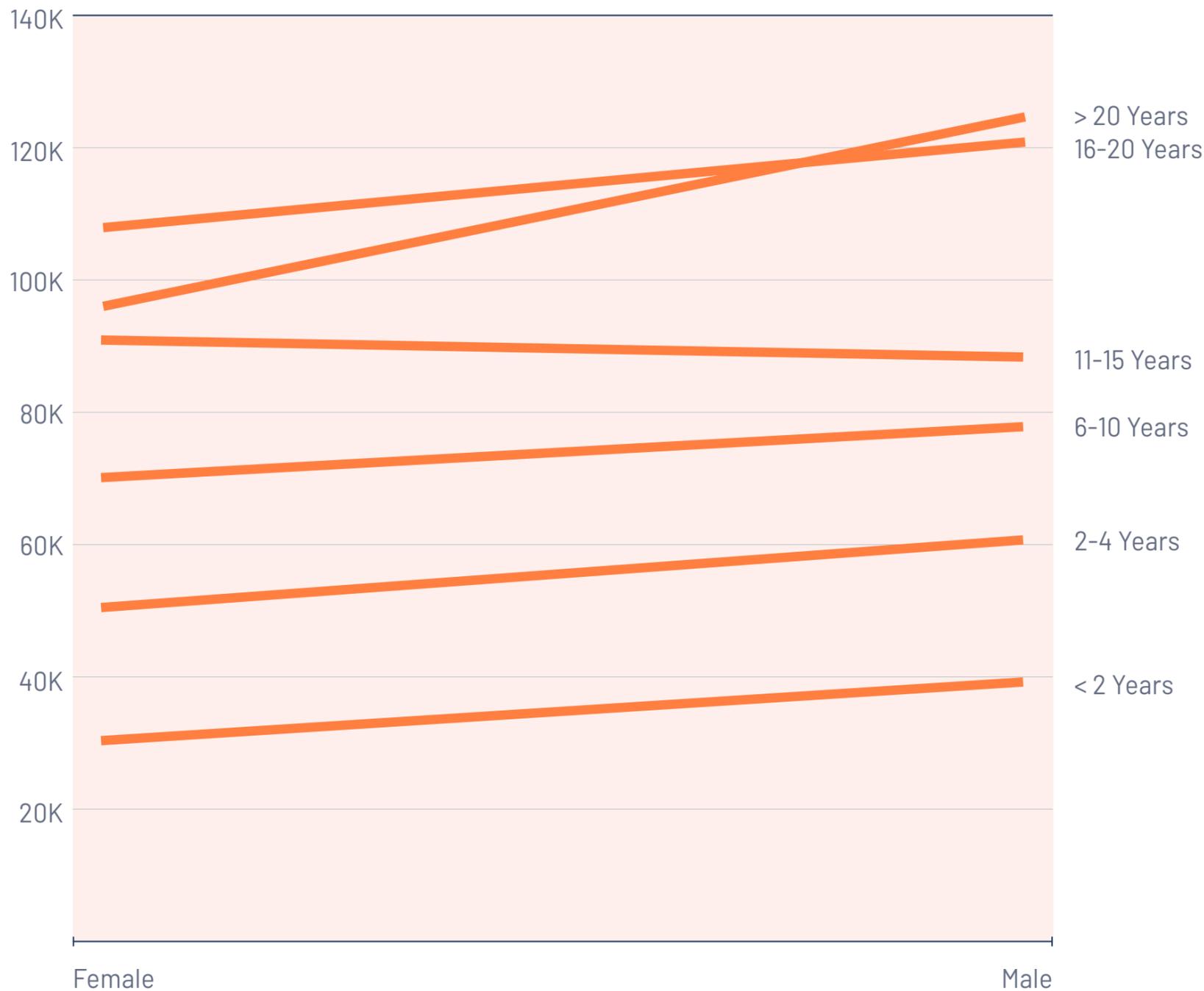
Gender
Pay Gap

The gender pay gap appears to be the smallest in professional services.

Gender Pay Gap by Employer Type

Employer Type	Gender Pay Gap
Industry	52%
Bank	46%
Investment Fund	35%
Infra/Power Developer	18%
Professional Services	6%

Training & Skills
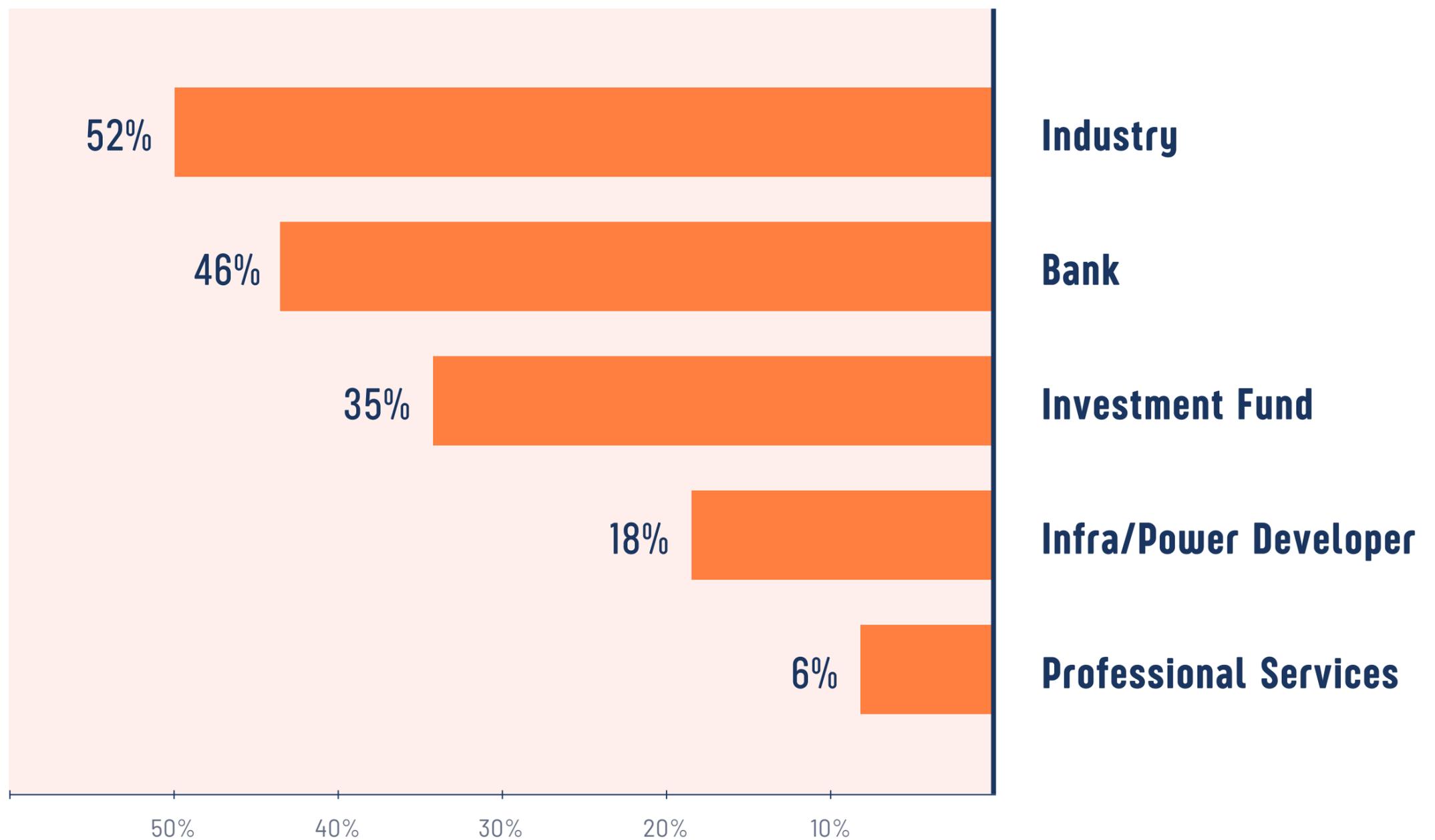
The proportion of modellers who are self-taught has reduced. Financial modelling qualifications are becoming more prevalent.

Compared to 2019, more modellers believe that their skills have enhanced their career prospects and that their work is highly valued by others.

%	2019	2021
of financial modellers self-taught	57	49
of modellers with a modelling qualification	n/a	23
of modellers who believe that their skills have enhanced their career prospects	87	90
of modellers who believe that their work is highly valued by others	85	88

Training & Skills

23% of modellers now hold a modelling qualification.
Among them, the AFM qualification from the Financial Modeling Institute is the most common.

Top 3 Financial Modelling Qualifications

| Qualification	Percentage
FMI – AFM	50%
CFI – FMVA	34%
FMI – CFM	14%
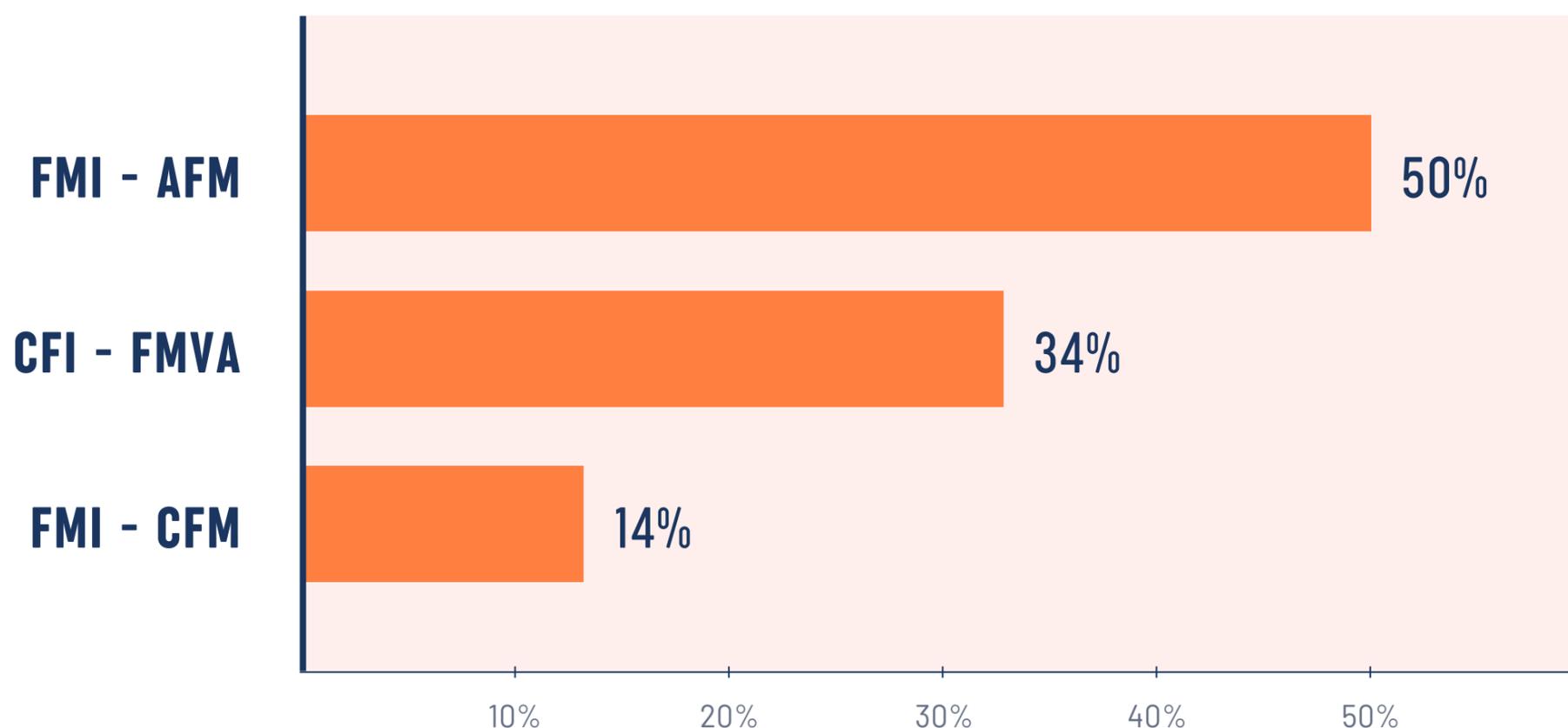
Raising the Standard

95% of respondents believe that standards are important, up from 91% in 2019.

41% of modellers work in organisations where standards are applied rigorously. This is 4% lower than 2019. In professional services firms, where there are more likely to be larger modelling teams, this figure goes up to 64%.

Of those who report using a standard, the majority use an in-house code of best practice.*

*There may be a selection bias in this data since the survey was promoted to, among others, followers of Full Stack Modeller, and those who have taken Gridline's free training, both of which teach the FAST Standard.

Most Frequently Used Modelling Standards

Standard	%
In House Code	53%
FAST	24%
Mazars (SMART)	9%
ICAEW Code	6%
BPM	5%
Mix / Other	3%
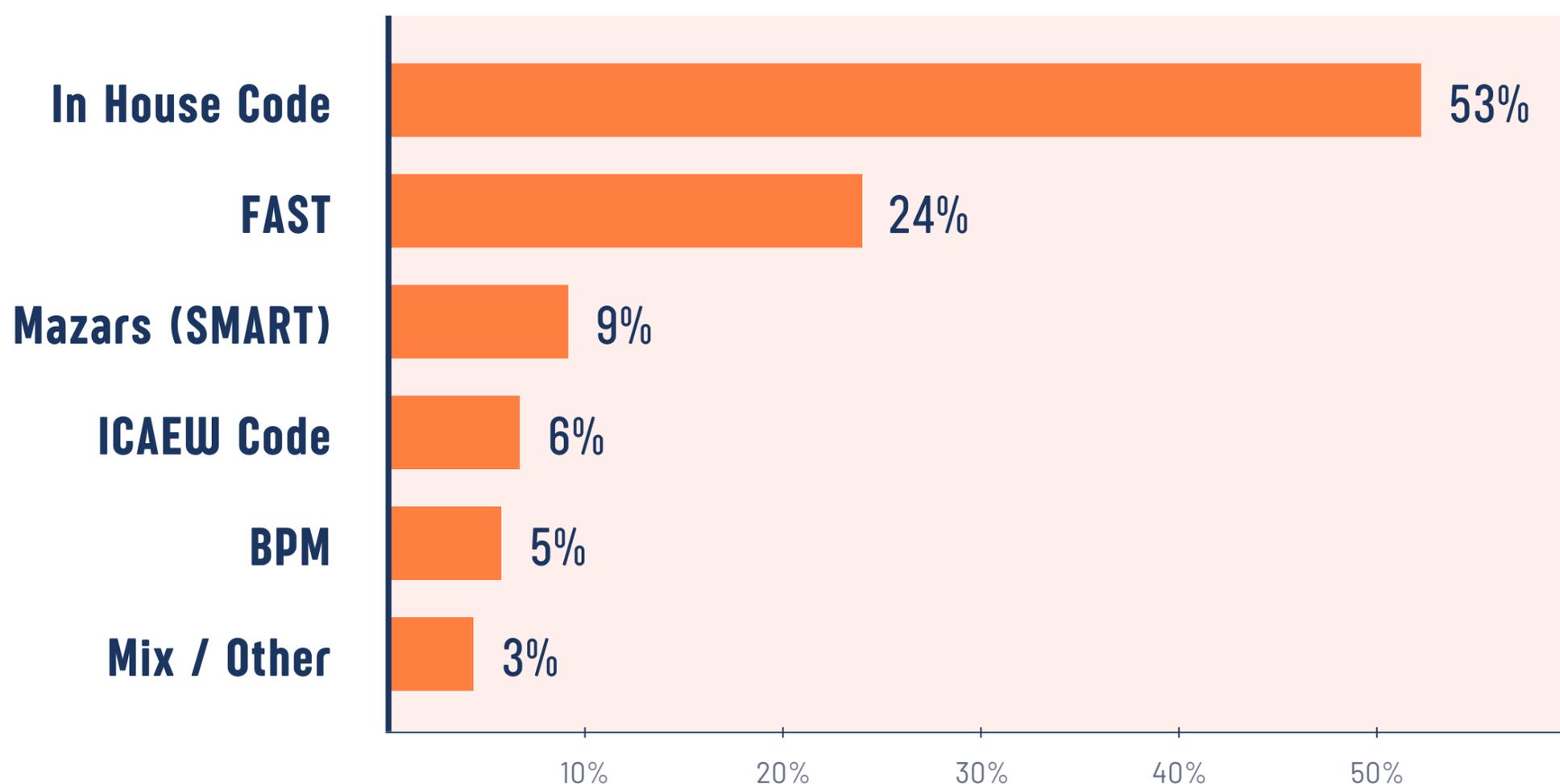
Raising the Standard

Nearly half of all modellers (48%) report that their models are not subject to any kind of internal review process.

23% of modellers have their models audited externally.

48% of modellers report making material errors that were not picked up by an internal review process.

This proportion trends upwards with experience.

28% of modellers with less than 2 years experience report making material errors, rising to 58% among those with more than 10 years of experience.

Are the less experience modellers making fewer errors, or less aware of the errors they are making?

More than a quarter of modellers (28%) do not understand all the logic in the models that they use.

Technology

76% of modellers do not use any other tools outside of Excel.
Of those who do, the more frequently mentioned tools include:

Power BI   **Bloomberg**   Operis Analysis Kit

macabacus   S&P Capital IQ   **PERFECTXL**

Airexcel, Crystal Ball & In-house tools

By far the most common applications that modellers want to develop their skills in are

Power BI   +ableau

Frustrations

We asked modellers to share their biggest frustrations. Nearly all survey respondents had frustrations to share.

Financial Modellers' Top 5 Frustrations

1   Models which are overly complex / difficult to review.

2   Managing client / user expectations.

3   A lack of Excel skills on the team.

4   Modelling is too time-consuming / too manual a process.

5   Lack of standardisation.

Other frequently mentioned frustrations included:
- Excel crashing /running slowly
- Access to data / difficulty in data collection
- Difficulty in updating other people's models

And, of course, getting the balance sheet to balance!

Full Stack Modeller is an online learning and membership community for finance professionals who are ready to embrace the future.

Master the full stack of financial modelling skills and technologies through interactive practical training.

Find out more at
fullstackmodeller.com

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