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FM
Financial Management

SKILL STEPS

Careers that develop beyond finance

10

ALSO

I'm not learning new skills at my company — what do I do?

30

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CONTENTS

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SIMON BITTLESTONE, FCMA, CGMA

Farewell to Barry Melancon

'Throughout his career, Barry always understood the need to innovate and adapt.'

It is with bittersweet emotions that I write my last *FM* column of 2024.

Earlier this year, Barry Melancon, CPA, CGMA, CEO of the Association of International Certified Professional Accountants, announced he would be retiring at the end of this year after serving the profession for more than 30 years. The time has now come for me, as chair of the Association and CIMA president, to pay tribute to Barry and his remarkable achievements.

While it's always tough to see such a prominent figure go, it's also a moment to celebrate Barry's journey and the lasting impact he has made.

Let me tell you a bit more about him.

Barry started his accounting career in the US state of Louisiana, rising to CPA firm partner before becoming executive director of the Society of Louisiana CPAs at age 25. Twelve years later, he took the helm as the youngest CEO of the American Institute of CPAs. Since 2017, Barry has also served as the first CEO of the Association of International Certified Professional Accountants, jointly formed between CIMA and the AICPA.

Under his leadership, the Association became the world's largest and most influential membership body for management and public accountants, which now serves just under 600,000 members, candidates, and registrants across 188 countries and territories. Barry also played an instrumental role in enhancing the recognition of chartered management accountants and elevating management accounting globally by spearheading the creation of the Chartered Global Management Accountant (CGMA) designation. In addition, over the years, he put great emphasis on increasing accessibility to the profession through different learning pathways — the CGMA Finance Leadership Program and our apprenticeship schemes being prime examples.

Throughout his career, Barry always understood the need to innovate and adapt, be that with the groundbreaking Future of Finance research programme and empowering members to develop a digital mindset; driving integrated thinking, reporting, and sustainability initiatives; or taking a stance for the profession to actively address diversity, equity, and inclusion issues. He has been one of the strongest advocates for the profession, promoting its value and showcasing how it powers trust, opportunity, and prosperity — to regulators, policymakers, standard-setters, educators, and the business community worldwide.

Barry's track record of establishing trust, visionary leadership, and passion for the profession goes beyond his work at the Association, the AICPA, and CIMA. He played a key role as board chair of the International Integrated Reporting Council, leading its subsequent path into the IFRS Foundation and formation of the International Sustainability Standards Board. He has served as board chairman of the Global Accounting Alliance, board member of the Center for Audit Quality, and a member of the AICPA's delegation to the International Federation of Accountants.

We are forever grateful for Barry's lifelong commitment and service as a transformative leader and passionate champion for the accounting and finance profession. On behalf of all of us, I extend our deepest thanks and best wishes to Barry as he embarks on the next phase of his life.

As we say goodbye to Barry, we also welcome our new CEO, Mark Koziel, CPA, CGMA, who will start on 1 January. We wish Mark every success in leading the Association's work to accelerate our growth and lead our profession into an era of innovation, transformation, and prosperity.

And as we move into 2025, we can reflect that during 2024 our profession continued to deliver on our purpose of powering trust, opportunity, and prosperity for the organisations, communities, and economies we serve. I am confident that we will remain resilient, tackling challenges head-on in the year to come. All the best for 2025.

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PHOTO BY BARNEY JAMES/TIMELESS PICTURES

Empowering your career journey

By Andrew Harding, FCMA, CGMA

Enhancing our members' skills, learning, and career growth are at the very heart of everything we do at AICPA & CIMA. This mission is exemplified by the CGMA Professional Qualification and CGMA designation, which demonstrate to employers anywhere in the world your understanding of business, your commercial acumen, and your expertise as a business partner and value creator. In short, that you have what it takes to succeed in today's workplace.

Our professional qualification teaches you the skills and competencies you need to guide critical business decisions, drive strong business performance, and lead transformation. But with up to five generations now represented in the modern workplace, we must place greater emphasis on providing accounting and finance professionals with tools for growth and transformation throughout their careers.

Our research

This year, a prime example of how we have supported our members is through our Future of Finance 2.0 research programme, which explores the future of the management accounting and finance profession and its broader ecosystem, defining essential skills, competencies, and knowledge needed to succeed. Our findings underpin the development of the future CGMA Professional Qualification syllabus as well as other certifications, thought leadership, and learning resources. They help to ensure you remain relevant in a competitive talent landscape.

We have updated and relaunched our Global Management Accounting Principles (GMAP) — the blueprint for management accounting theory and practice. They outline how accounting and finance professionals can enhance decision-making and drive long-term value creation for their organisations in an era of expanding digitalisation, accelerating adoption of artificial intelligence tools, and increasing ESG importance. We have also experienced growing success with our flagship ENGAGE conference series, with events taking place in Africa, Europe, the UK, and US. And we have continued to help you reskill and upskill through our webcasts, articles, guides, and toolkits.

The next generation

A large part of our work focuses on inspiring the next generation to join our profession and making them aware of the great opportunities it offers.

In practical terms, this means that we need to continue improving our learning offerings and increase the number of pathways into our profession to meet the needs, expectations, and motivations of each generation. We must never dilute the rigour of our qualification, but we must ensure that routes available to earning it are fit for the modern world.

Great examples of this are our apprenticeship schemes we support in the UK and US. In these markets, the high cost of university is, increasingly, a pressing issue. Apprenticeships offer an "earn while you learn" path into management accounting, without the need to gain a degree first. It is imperative that we do not shut out great talent because of the cost.

For more than a century, our professional qualification, thought leadership, conferences, events, networking opportunities, and learning resources have supported countless careers. While we recognise the importance of continually adapting and innovating, our core purpose remains unchanged: We empower the world's most highly skilled accounting, business, and finance professionals — and their organisations and diverse economies — to thrive. As we move into 2025, we look forward to empowering you further in your career journey. ■

Andrew Harding, FCMA, CGMA, is chief executive–Management Accounting at AICPA & CIMA, together as the Association of International Certified Professional Accountants.

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Mark Koziel to become CEO of the Association of International Certified Professional Accountants

Mark Koziel, CPA, CGMA, who has been named as the next CEO for the Association of International Certified Professional Accountants, will begin the role in January 2025.

By Kim Nilsen

Mark Koziel, CPA, CGMA, has been named as the incoming CEO of AICPA & CIMA, which operate together as the Association of International Certified Professional Accountants.

The appointment comes after a comprehensive global search for a successor to Barry Melancon, CPA, CGMA, the longest-serving CEO in AICPA history, who announced in May that he would retire at the end of the year.

Koziel will begin his role 1 January 2025 after a transition period. He is president and CEO of Allinial Global, the world's second-largest accounting association. Allinial Global has 268 member firms with locations throughout the world generating over $6 billion in collective revenues. He is responsible for strategic planning, financial performance, and Allinial's overall growth and success.

Prior to joining Allinial in 2020, Koziel spent 14 years with the AICPA and later the Association. He began his career at an accounting firm in Buffalo, New York, in the US.

Koziel has been a leader and advocate for accountants. He has appeared amongst the top 10 of *Accounting Today*'s Top 100 Most Influential People in Accounting and been included in the *International Accounting Bulletin*'s Global Accounting Power 50 List.

The Association Board of Directors worked with Korn Ferry, the largest global executive search firm, to identify the next CEO. The board's selection committee, chaired by past Association Chair Anoop Mehta, CPA, CGMA, identified, screened, and interviewed candidates from all over the world.

"I am excited and honoured to be appointed CEO of the world's largest accounting membership body," Koziel said in a press release. "I look forward to playing a key role in leading the organisation and the profession to new heights. The profession is well positioned to expand and continue to evolve the value it brings serving the public interest and addressing the challenges faced by economies, business, and society. I cannot wait to start working closely with members, candidates, volunteers, and staff to do just that and drive our great profession forward."

Melancon said in a press release: "Serving the profession over the last 30 years has been a great honour, and I have been fortunate to have played a part in its transformation. I am thrilled to see Mark appointed to the role, knowing his passion and vision for the profession and AICPA & CIMA. Mark will do a fantastic job." ■

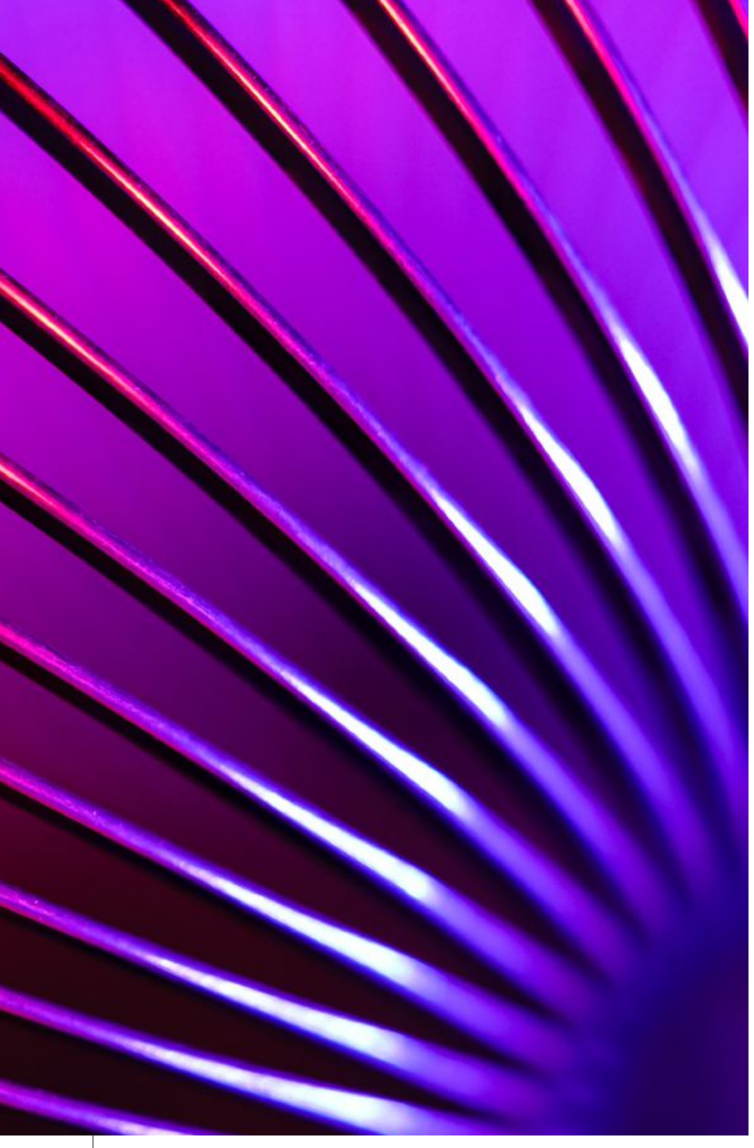
Kim Nilsen is senior director–Reputation Management and External Relations for the Association of International Certified Professional Accountants.

IMAGE BY DIMABERLIN/ADOBE STOCK

How to build a resilient skillset beyond finance

Adapting a career in finance to other roles across a range of sectors requires building on core competencies and developing a resilient skillset.

By Andrew Kenney



In the UK, Lyla Copeland, ACMA, CGMA, took a nontraditional path to launch her career in finance, bypassing the typical university route — and ended up working on pricing strategy for AI products at one of the world's largest data and information companies.

In Nigeria, Lawrence Amadi, ACMA, CGMA, took a childhood interest in computers and turned it into a job as partner and head of tech assurance at KPMG.

In South Africa, Thandeka Buthelezi, ACMA, CGMA, took an unexpected turn in her finance career, landing a role in human resources consulting at one of her country's largest telecom providers.

And in Sri Lanka, Dhashma Karunaratne, FCMA, CGMA, has helped drive inclusivity through automation at the Port of Colombo, with a focus on creating new roles for women, not only in leadership but also in new areas such as operating automated cranes from an office setting.

Each one has developed a specialised niche, combining a core of finance competencies with advanced tech skills and knowledge of other business areas.

But how did these finance innovators build their unusual skillsets? How did they predict the skills they would need for fast-evolving roles in technology, or specialties like logistics and HR?

Those questions were the focus of a series of interviews conducted by *FM*. The answers revealed tactics and strategies that could help finance professionals unlock new career paths. They also revealed one common theme: the resilient skillset.

4 actions for skillset development

People with resilient skillsets can cross between sectors and roles, learning and adapting to industry shifts, advances in technology, and unforeseen changes or opportunities in their career path. For all their variety, these career paths often share four key actions.

Find a spark of interest

In many cases, a distinctive career path begins with a spark of interest. For Amadi, that spark was the personal computer shared with his six siblings in Lagos, Nigeria.

"Every time I played games online, I got more fascinated about technology," he said. "You want to understand the science behind what's going on."

He acted on that curiosity, making technology a focus as he completed his studies and began his career at KPMG.

"I hadn't done any major programming. I hadn't done any coding. But I knew this was going to be comfortable," he said. "I told them I was a self-starter."

Similarly, by following her interests, Copeland also learned about the unpredictable ways that a finance career can blossom. "I have to admit, I'm not one of those 'grand plan' people," she laughed. "There was only a natural interest, and that natural interest was in understanding [business] drivers, helping decisions."

That focus led her from a job as a management accountant at a watch company, to a role in Australia as a commercial manager at Coca-Cola, and eventually to her position at Thomson Reuters in London setting strategies for the pricing of legal technology, with a focus on emerging generative AI products.

Adapt to the unexpected

Career paths aren't straight lines. You'll have to adapt your ambitions to new settings.

Take the example of Buthelezi. She was fascinated by manufacturing during her childhood in rural South Africa. She wondered how the peaches grown in local orchards were transformed into chutney and other food products.

But as she launched her career almost a decade ago, Buthelezi found an opportunity in telecommunications. Instead of rebuffing the job as an imperfect fit for her interest in manufacturing, she thought about how it would fit into her own framework.

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"I had no idea this is where I'd end up," she said.

In her current role in HR, Buthelezi collates and analyses data on how each department is fulfilling various personnel goals. But she looks at the work through the lens of her original interest in manufacturing.

"What you input is your human capital. What you output is customer satisfaction," she said. "For me, that's the base of my understanding."

That adaptable attitude has ensured her work feels relevant to her own interests, and it has helped her to maintain a focus on the future, too. "It's not always going to be a straight road," Buthelezi said. "You have to be able to adapt and adjust, while also knowing what the goal is."

In Sri Lanka, Karunaratne has followed a similar mantra of adaptability. Her parents expected her to grow up to be a doctor. Instead, she is the only woman in the C-suite at the Port of Colombo, serving as the chief commercial officer.

"I chartered on a different journey for my own self," she said. "I always wanted to broaden my skillset. At an early age, I realised that managing people is the most integral thing in managing performance."

She's also proud to note that she became a mother along the way. While leading teams of hundreds, she also turned to her own family, at home and church, for support and happiness.

"My life journey and career journey always intertwined," she said.

Pick relevant tech skills

Having a tech-heavy skillset is always helpful, but professionals have limited time and resources to learn new skills. That's why it's crucial to tie skills development back to your own aims and to the company's immediate needs.

"You've got to think about what's the end goal? What do I want to do?" Amadi advised.

Instead of, say, learning to code because it's popular, ensure you have a specific goal, such as advancing data analytics skills in order to strengthen your decision-making, he said.

Some of the most useful technology skills will be those related to analytics, including platforms like Power BI and Alteryx, according to Copeland. Often, she said, "you can't rely on anyone else to do your analytics, and you've got to have analytics".

Though Copeland learned to build complex financial models in Excel during her time at the watch company, she expanded beyond that as her career developed.

"I worked with the data science team," she said of her time at Coca-Cola. That meant learning about a whole set of analysis techniques that went beyond her capacities in Excel. She knew she didn't need to master every skill she encountered. What was crucial was seeing other specialists at work and understanding what was possible with advanced data analysis.

"That was what really pushed me to say, 'I want to find information that is actually going to drive decisions, drive real outcomes,'" she said.

Go beyond technology

Tech skills aren't the only way to ensure a resilient career. Those interviewed for this article also emphasised the need for more human-centric skills like relationship building and strategic thinking, as well as deep expertise in finance itself.

Today, as partner and head of tech assurance, Amadi combines IT audit responsibilities, IT deal services, and relationship building with CFOs. His broad finance background has allowed him to add a layer of insight and strategy, he said, that is sometimes missed by pure tech specialists.

"When you put together [experience with] operations, reporting, HR, you can make a better sense of the organisation's direction," he said.

Karunaratne said that she has kept one eye on the challenges directly ahead — and the other on the horizon.

Setting a resilient career path is about "insight and intuition, what's trending, what do I foresee, as well as the need of the hour", she said, and "what would help me to do my job better and position myself as a business partner for the organisation". ■

Andrew Kenney is a freelance writer based in the US. To comment on this article or to suggest an idea for another article, contact Oliver Rowe at Oliver.Rowe@aicpa-cima.com.

AICPA & CIMA RESOURCES

Article

"Want to Change Sector? Here's What to Consider", *FM* magazine, 21 November 2023

Podcast episode

"Struggling Actor to CPA Firm Owner: One Leader's Unlikely Path", *Journal of Accountancy*, 19 January 2023

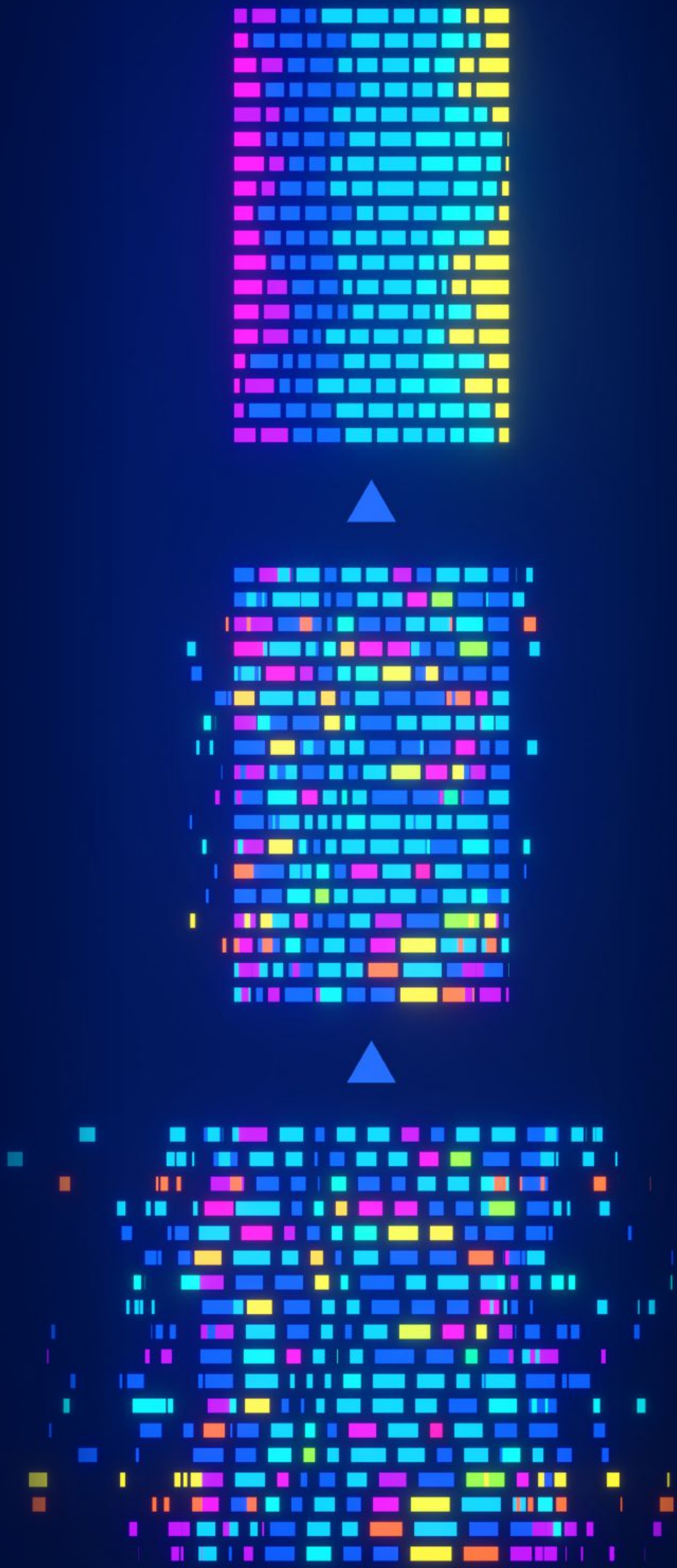


IMAGE BY NICOELNINO/ADOBE STOCK

Using the AI in Power BI to do root cause analyses

A step-by-step guide shows how the advanced data analytics features in Power BI can solve business problems in minutes rather than hours.

By William Stewart Thomas, CPA, CGMA, Ph.D., and Dena Dail Breece, CPA, CGMA, Ph.D.

How can finance functions add more value? It's a challenge accountants and finance professionals in business and industry increasingly face.

One way to boost efficiency and productivity is by speeding up financial root cause analyses with artificial intelligence (AI) tools in data analytics software Microsoft Power BI. These tools can do in minutes what takes hours with Microsoft Excel. But switching gears can be daunting, so here's an interactive, step-by-step example to get you started.

Imagine we're accountants in the finance department of Pro Flight Grips Inc., a fictitious company that manufactures grips for recreational products for customers across North America. The company has three product lines — plastic, cord (rubber with cord fabric for moisture absorption), and regular (rubber) — and it manufactures and sells the following products: golf grips (full-cord, half-cord, and cord grips for putters; regular swing club grips; and grips without seam), ski handles, and tennis racket grips.

While preparing financial statements for top management, we notice a significant drop in sales in a month that typically shows more robust demand. How do we quickly determine the underlying cause of this problem in anticipation of management's questions?

Historically, this question might have taken hours or days to investigate. Now, data analytics assisted by AI can quickly provide a summary and detailed analysis in a fraction of the time.

In the example of Pro Flight Grips, we identify possible causes at a high level with the help of Power BI's AI "Analyze" feature, then investigate further at detailed levels using Power BI's "Decomposition Tree". We include the use of Power BI's "Key Influencers" to determine possible means of recovery and conclude with the use of the "Smart Narrative" feature to quickly summarise various findings.

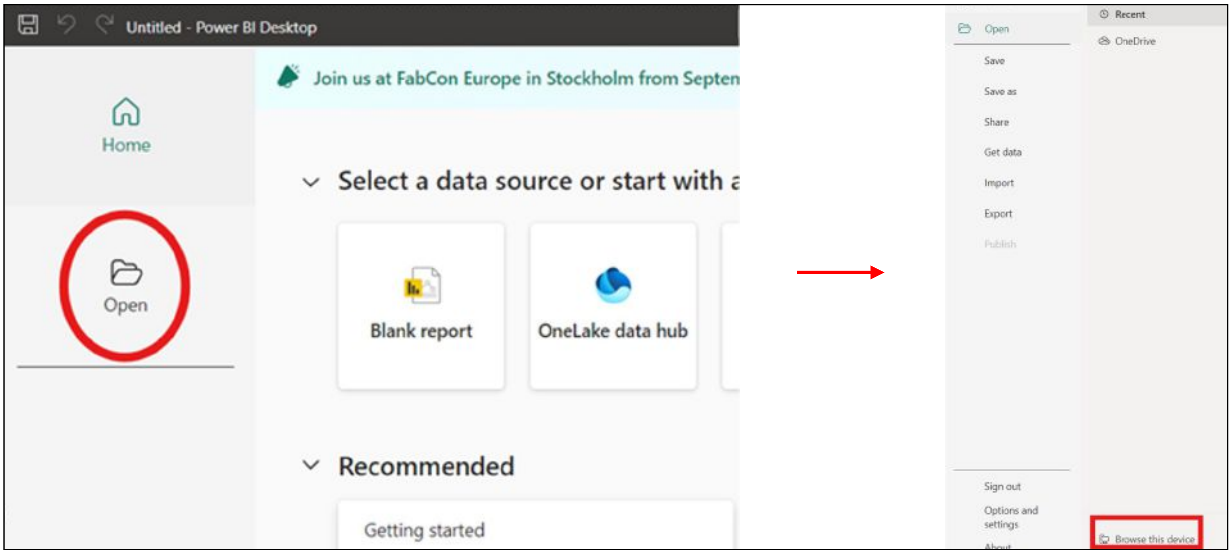
While this article uses the AI capabilities found in Power BI, other data analytic products such as Tableau, MicroStrategy, and Qlik may work as well.

Getting started with Power BI

In a real-life scenario, we would start the analysis by importing data into Power BI (see how in the March 2020 *Journal of Accountancy* article "Power BI: An Analytical View"). To follow along in this walk-through, do the following:

- Download the file "Power BI Income Statement Data Example.pbix" from this page on the FM website.
- Open Power BI Desktop. (A free version of Power BI Desktop is available, if necessary.)
- Open the sample data file.
  - Click the "Open" icon (shown in the red circle in the screenshot, "Opening the Sample Data File in Power BI").
  - Find and open the downloaded Power BI file. To do so, look at the bottom of the "Open" section and click "Browse this device" (shown in the red box in the screenshot "Opening the Sample Data File in Power BI") to access the file explorer.

Opening the sample data file in Power BI

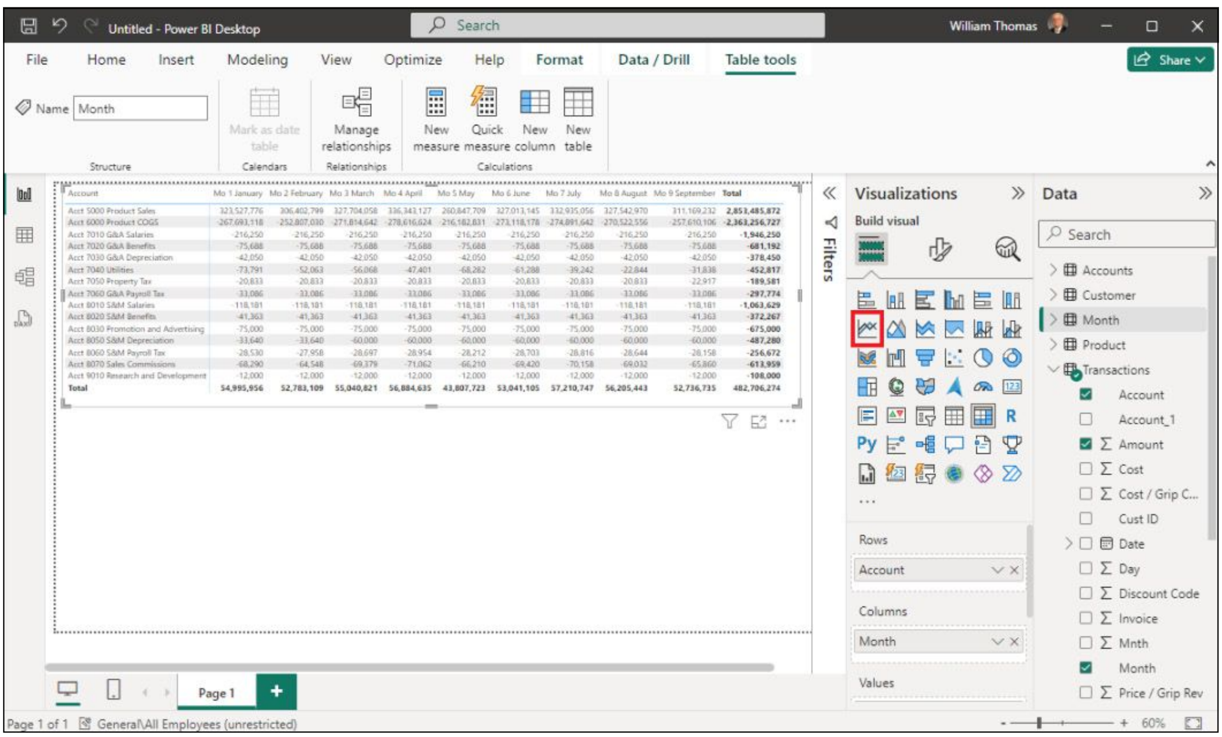


Problem identification

Step 1: Data review

Upon opening the Power BI file, the income statement data appears as loaded in a matrix visualisation (see the screenshot "Matrix Visualisation With Income Statement Data").

Matrix visualisation with income statement data

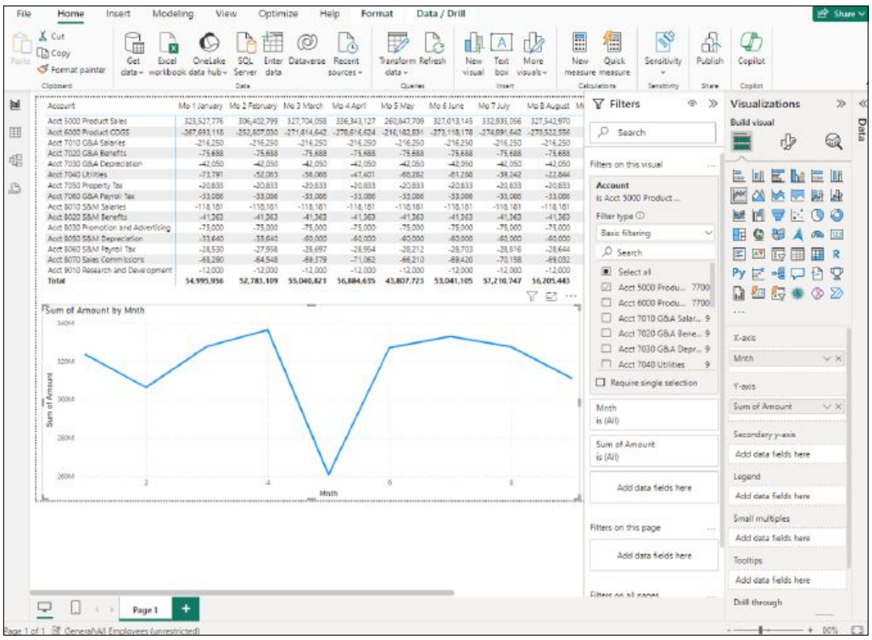


To better examine the income statement data, a portion of the visualisation (see the screenshot "Matrix Visualisation With Income Statement Data") has been included and enlarged due to the limited size shown in the screenshot. (See the screenshot "Partial Income Statement Data".)

Partial income statement data

Account	Mo 1 January	Mo 2 February	Mo 3 March	Mo 4 April	Mo 5 May	Mo 6 June
Acct 5000 Product Sales	323,527,776	306,402,799	327,704,058	336,343,127	260,847,709	327,013,145
Acct 6000 Product COGS	-267,693,118	-252,807,030	-271,814,642	-278,616,624	-216,182,831	-273,118,178
Acct 7010 G&A Salaries	-216,250	-216,250	-216,250	-216,250	-216,250	-216,250
Acct 7020 G&A Benefits	-75,688	-75,688	-75,688	-75,688	-75,688	-75,688
Acct 7030 G&A Depreciation	-42,050	-42,050	-42,050	-42,050	-42,050	-42,050
Acct 7040 Utilities	-73,791	-52,063	-56,068	-47,401	-68,282	-61,288
Acct 7050 Property Tax	-20,833	-20,833	-20,833	-20,833	-20,833	-20,833
Acct 7060 G&A Payroll Tax	-33,086	-33,086	-33,086	-33,086	-33,086	-33,086
Acct 8010 S&M Salaries	-118,181	-118,181	-118,181	-118,181	-118,181	-118,181
Acct 8020 S&M Benefits	-41,363	-41,363	-41,363	-41,363	-41,363	-41,363
Acct 8030 Promotion and Advertising	-75,000	-75,000	-75,000	-75,000	-75,000	-75,000
Acct 8050 S&M Depreciation	-33,640	-33,640	-60,000	-60,000	-60,000	-60,000
Acct 8060 S&M Payroll Tax	-28,530	-27,958	-28,697	-28,954	-28,212	-28,703
Acct 8070 Sales Commissions	-68,290	-64,548	-69,379	-71,062	-66,210	-69,420
Acct 9010 Research and Development	-12,000	-12,000	-12,000	-12,000	-12,000	-12,000
Total	**54,995,956**	**52,783,109**	**55,040,821**	**56,884,635**	**43,807,723**	**53,041,105**

Line chart visualisation



Step 2: Analyze sales

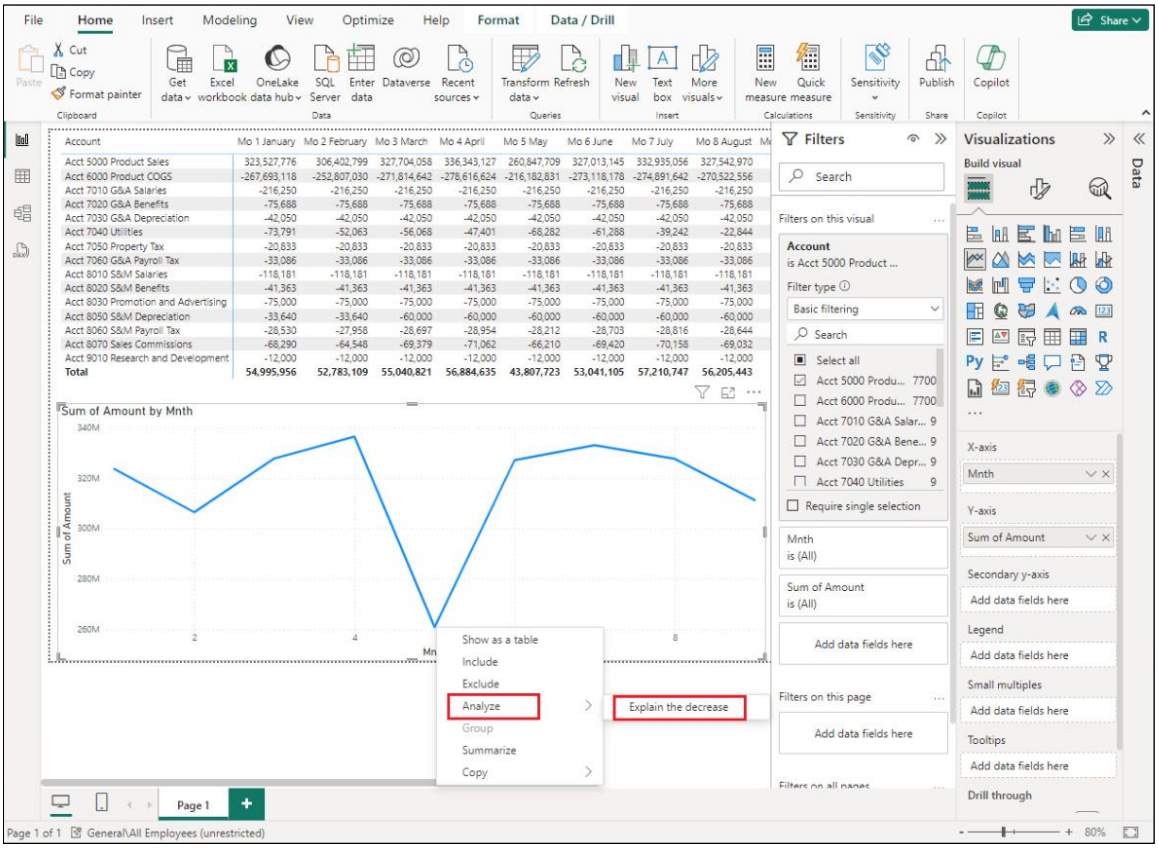
To conduct a quick analysis of sales, create a line chart visualisation of product sales by month.

Here's how:

- Click on an open space in the Power BI canvas area (the blank space below the income statement as shown in the screenshot "Matrix Visualisation With Income Statement Data").
- Click on the line chart visualisation icon outlined by the small red box (see the screenshot "Matrix Visualisation With Income Statement Data").
- From the "Data" pane, left-click and drag the "Mnth" field (located in the "Transactions" table) and release it in the "X-axis" cell located in the "Visualizations" pane.
- Left-click and drag the "Amount" field and release in the "Y-axis" cell.
- Left-click and drag the "Account" field and release it in the "Filters" pane in the "Add data fields here" under the "Filters on this visual" block.
- Under "Filter type" select "Basic filtering" and select "Acct 5000 Product Sales".

The resulting line chart shows a significant decline in month 5, which is May. The line visualisation tool in Power BI prefers to use month numbers on the axis. (See the screenshot "Line Chart Visualisation".)

Line chart visualisation: Month 5 observation



'Analyze' feature

Step 1: Investigate the decrease in sales

To determine the cause of the sales drop, we first turn to Power BI's "Analyze" feature — the fastest and perhaps most powerful AI tool in Power BI.

To "Analyze" factors affecting sales:

- Scroll over the point designating Month 5, right-click on the point, then left-click on "Analyze" (as shown in the leftmost red box in the screenshot "Line Chart Visualisation: Month 5 Observation").
- Left-click on "Explain the decrease" (as shown in the rightmost red box in the screenshot "Line Chart Visualisation: Month 5 Observation").

Power BI's AI engine returns information called "Insights". They are composed of categories that influence the selected point the most with respect to data provided to Power BI. These "Insights" quickly help us explore the root cause of the Pro Flight sales decline with information for data analysis purposes.

In the example, the insights returned include Sum of Amount (Sales):

- "By Mnth [month] and Product Line";
- "By Mnth and Product";
- "By Mnth and Day";
- "By Mnth and Customer";
- "By Mnth and Address";
- "By Mnth and Sales Person";
- "By Mnth and State";
- "By Mnth and Country";
- "By Mnth and Cust[omer] Type"; and
- "By Mnth and Discount Code".

Note the summary information shown in the green box at the top of the "Insight Prompt of the 'Analyze' Feature" screenshot indicates "... the analysis of the 22.45% decrease in Sum of Amount between [month] 4 and 5."

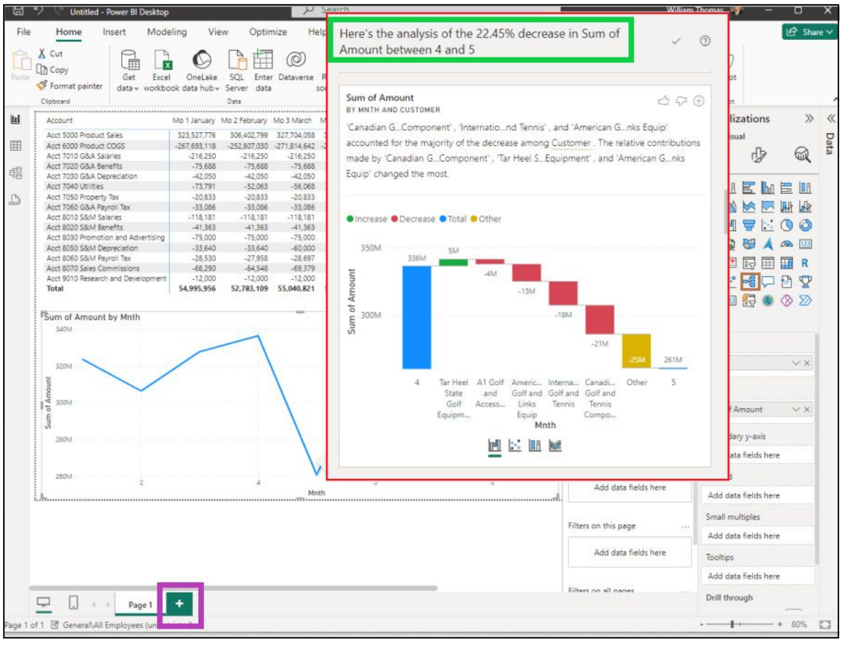
Step 2: Review the results

Based on its machine learning algorithms, Power BI quickly generates the previously noted "Insights" affecting the "Sum of (sales) amount" automatically. Power BI's AI analysis provides ten insights addressing the decrease in sales using the "Analyze" feature. We can review each insight to pinpoint which are most useful in determining the root cause of the sales decline.

By scrolling down the "Insights" provided, we find the following:

- ("By Mnth and Product Line") Cord shows the largest product line decline of $103 million.
- ("By Mnth and Product") Half cord shows the largest decline of $51 million.
- ("Sum of Amount By Mnth and Customer") Canadian Golf and Tennis shows the largest customer decline in sales of $21 million (as shown in the red box, see "Insight Prompt of the 'Analyze' Feature" screenshot).
- ("By Mnth and Sales Person") Judy shows the largest decline by salesperson of $39 million.
- ("By Mnth and State") Ontario shows the most significant decline for state (region) of $15 million.
- ("By Mnth and Country") The US shows the largest decline for countries of $54 million.
- While other insights exist, these would be considered the most relevant for decision-making purposes.

Insight prompt of the 'Analyze' feature



'Decomposition Tree'

Step 1: Select the visualisation

While the "Analyze" feature quickly provided a high-level analysis, we can further discover how the "Insights" relate to one another by using a "Decomposition Tree". This visualisation will provide a more detailed explanation of root causes in May's sales decline.

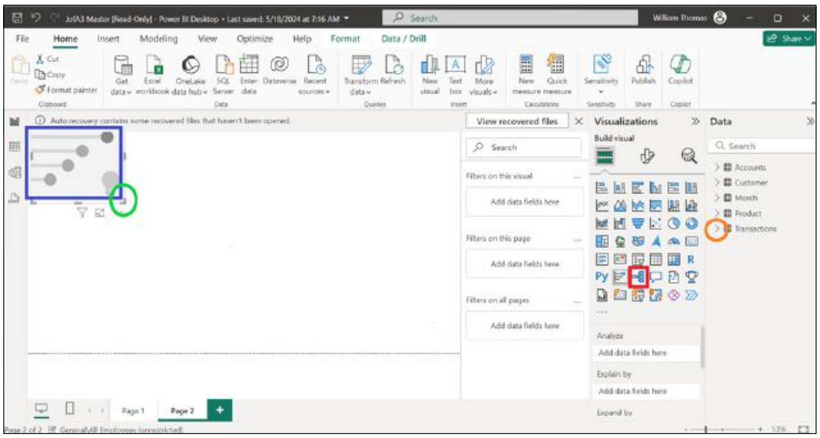
Let us investigate by first adding another page to our Power BI analysis. To add "Page 2", click the "+" in the purple square to the right of "Page 1" as shown at the bottom of the screen in the "Insight Prompt of the 'Analyze' Feature" screenshot.

While the $75,495,418 million decline in sales from April to May has been quickly analysed using insights from the "Analyze" function, a "Decomposition Tree" will provide further information as well as aid in determining answers to the primary cause of the May sales decline. Power BI's "Decomposition Tree" visualisation provides the ability to "decompose" or break down fields added to the visualisation. Since we learned that customer Canadian Golf and Tennis had a significant decrease in sales in May, let's further analyse what product line, product, and salesperson were responsible for the decline.

To prepare a "Decomposition Tree":

- Click on the Page 2 blank canvas.
- Click on the "Decomposition Tree" icon (see red square in the screenshot "Page 2 'Decomposition Tree'"). Note the "Decomposition Tree" visualisation now appears on the canvas area (outlined in the blue box on the "Page 2 'Decomposition Tree'" screenshot).
- Click on the blank "Decomposition Tree" visualisation shown in the blue box.
- Left-click on the bottom right angle shown in the leftmost green circle and extend the visualisation to the bottom right area to cover the canvas area.

Page 2 ‘Decomposition Tree’



Step 2: Selecting fields to be decomposed

Next, we define the visualisation for analysis by selecting the fields to be decomposed for further investigation:

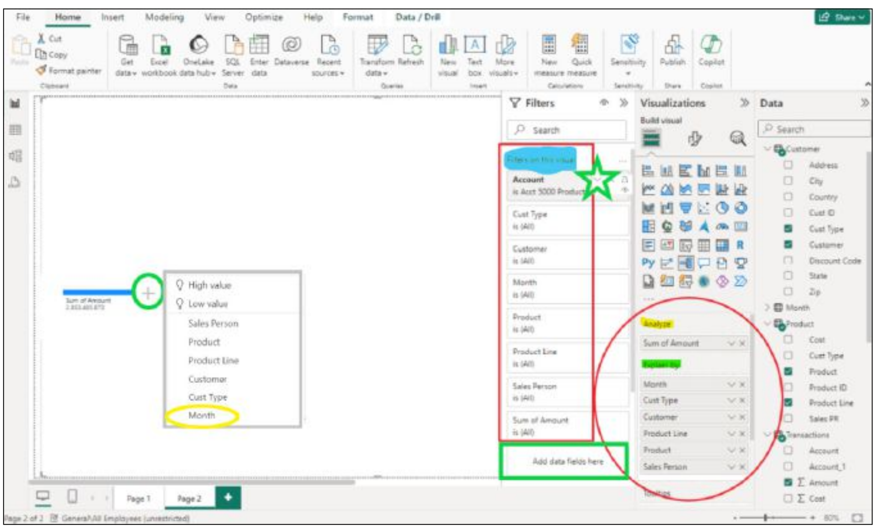
- Click on the right arrow (shown in the orange circle of the “Page 2 ‘Decomposition Tree’” screenshot) located to the left of the “Transaction” file name in the “Data” pane to display the fields for the “Transaction” file.
- Next, left-click, drag, and drop “Amount” from the “Transaction” file directly into the “Decomposition Tree” visualisation located on the canvas. The “Decomposition Tree” visualisation will show “Sum of Amount.”
  Continue to add fields directly to the “Decomposition Tree” visualisation by:
- Left-clicking, dragging, and dropping each of the following tables into the “Decomposition Tree”:
  - From the “Transactions” file, the tables “Month” and “Sales Person”;
  - From the “Customer” file, the tables “Cust Type” and “Customer”; and
  - From the “Product” file, the tables “Product Line” and “Product”.

Step 3: Filter the data

The next step in this process is to filter the fields selected to include only sales data. To filter the sales amount for May:

- Left-click, drag, and drop the “Account” field (from the “Transaction” file) into an “Add data fields here” box located under the “Filters” pane as shown by the green box in the screenshot “Decomposition Tree Visualisation”.
- Move your cursor over the “Account” filter and click on the down arrow as shown in the screenshot in the green star. Select “Basic Filtering” and click the box to the left of the “Acc 5000 Product Sales” field.
  Your visualisation should appear as shown in the “Decomposition Tree Visualisation” screenshot (with the exception of the grey box explained below).

Decomposition Tree visualisation



Note that the “Amount” field appears as “Sum of Amount” in the “Analyze” section highlighted in yellow in the “Visualizations” pane. In contrast, the “Month”, “Cust Type”, “Customer”, “Product Line”, “Product”, and “Sales Person” fields appear under the “Explain by” section highlighted in green and in the “Filters” pane along with the “Account” and “Sum of Account” fields under “Filters on this visual” highlighted in blue.

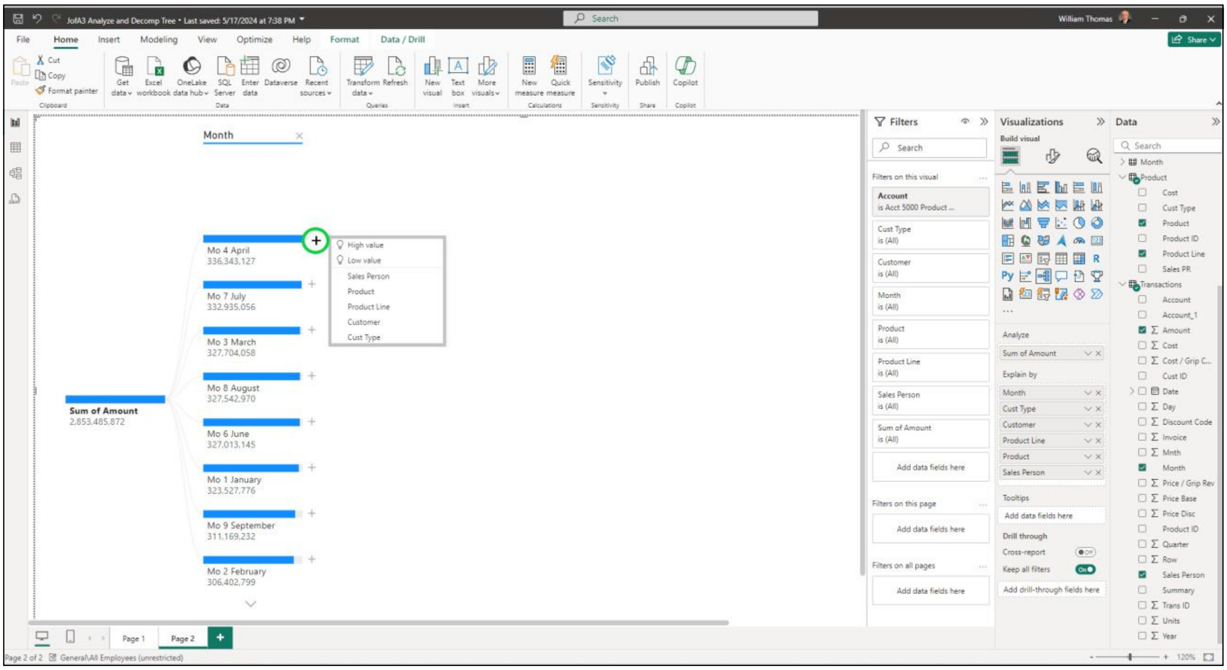
Step 4: Decompose selected fields

Because we know from the “Insights” section that customer Canadian Golf and Tennis had a significant decline in May sales, let’s investigate the root cause of this customer activity for specific products and salespeople associated with them.

To accomplish this:

- Click on the “+” sign shown in the green circle to the right of the blue bar, which is over “Sum of Amount” in the canvas area. A table of fields to select will appear as shown in the “Decomposition Tree Visualisation” screenshot in the grey box. Selecting one of these fields allows us to drill down or “decompose” the detail to a lower level. This “decomposition” can be repeated until all fields have been used.
- Continue by clicking the “Month” field circled in yellow.
  The results to this point are shown in the “Decomposition Tree Expanded to Analyse Observed Data” screenshot.

Decomposition Tree expanded to analyse observed data



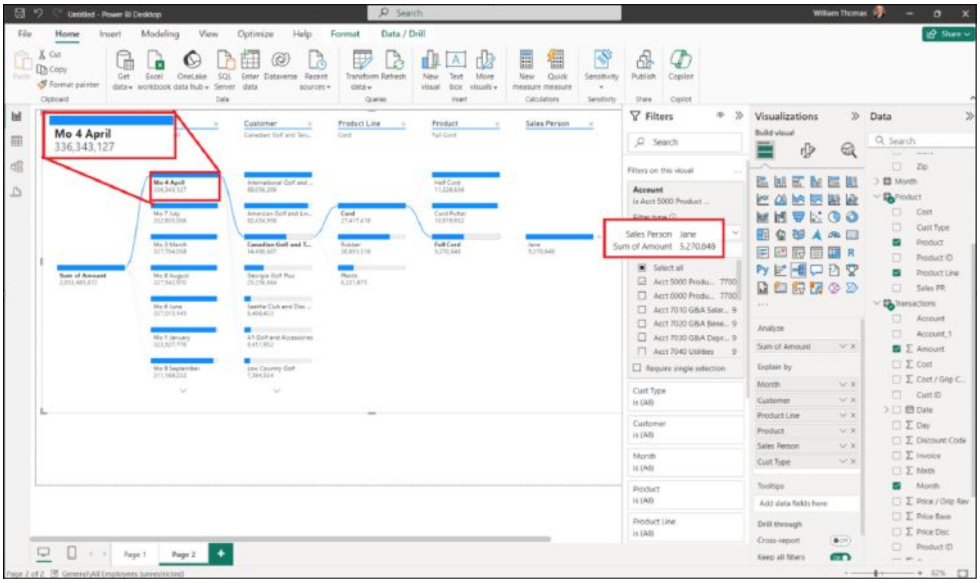
From the results, follow the below steps:

- Find “Mo 4 April” and click on the “+” circled in green in the “Decomposition Tree Expanded to Analyse Observed Data” screenshot, to the right of the blue bar over the top of its title.
- Click on the “Customer” field.
- From the results, find “Canadian Golf and Tennis” and click on the “+” to the right of the blue bar over the top of its title.
- Repeat this process by:
  - Selecting the “Product Line” field, clicking “+” beside “Cord”.
  - Selecting “Product” and finally clicking “+” beside “Full Cord”.
  - Selecting “Sales Person”.

Step 5: Analyse the Decomposition Tree

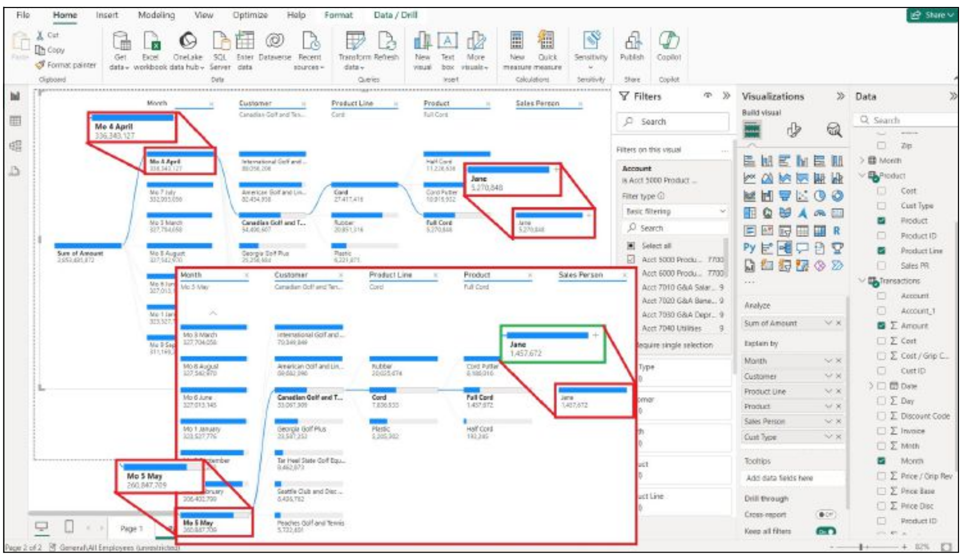
At this point, we have an expanded Decomposition Tree that breaks down each of the selected fields into the composition of additional fields. Based on this detail, we can analyse the information for April and compare it to May very easily. (See the screenshot “Decomposition Tree Further Expanded to Analyse Observed Data”.)

Decomposition Tree further expanded to analyse observed data



From this visual, we can see that Jane was the salesperson assigned to Canadian Golf and Tennis, and full cord sales for April were $5,270,848 (scroll your mouse over Jane's blue bar to see the white box detail). To compare to May, click on the "Mo 5 May" selection under the "Month" column, where we find Jane's sales of full cord to Canadian Golf and Tennis were $1,457,672 (shown in the green box of the "Decomposition Tree: Comparison Mo 4 April to Mo 5 May" screenshot) — a decrease from April to May of 5.1% of the total decline.

Decomposition Tree: Comparison Mo 4 April to Mo 5 May



While not shown, the same model can be used to determine the impact of sales lost from the cord putter product by clicking on "Mo 4 April" under the "Month" field column, followed by clicking on "Cord Putter" under "Product". Jane is the salesperson for this product, with sales in April of $10,919,932. Clicking on "Mo 5 May" under the "Month" field column, we learn Jane's sales for May for cord putter were $6,186,016 — a decrease in cord putter sales in May of $4,733,916, representing 6.3% of the total sales decline in May.

The overall analysis shows that the root cause of the sales decline was this account. We then would want to inquire of the account's salesperson, Jane, as to what happened and why the sales dropped.

Finding ideas to recover lost sales

Once we, as Pro Flight's accountants, determine the underlying causes of the problem and begin work to address them, the need for possible means of recovery may be desirable. A way to discover impacts either to increase sales or decrease sales is to use Power BI's "Key Influencers" feature.

Power BI's "Key Influencers" visualisation is a robust feature that aids understanding of how attributes drive (or "influence") a specific attribute. This visualisation analyses data and explains their impact as significant factors affecting the data as individual "Key Influencers" and groups (described in Power BI as "Top Segments") and their respective influencers.

The visualisation is customisable, allowing users to filter the visual and show the remaining values considered influencers by virtue of Power BI's AI selecting key data.

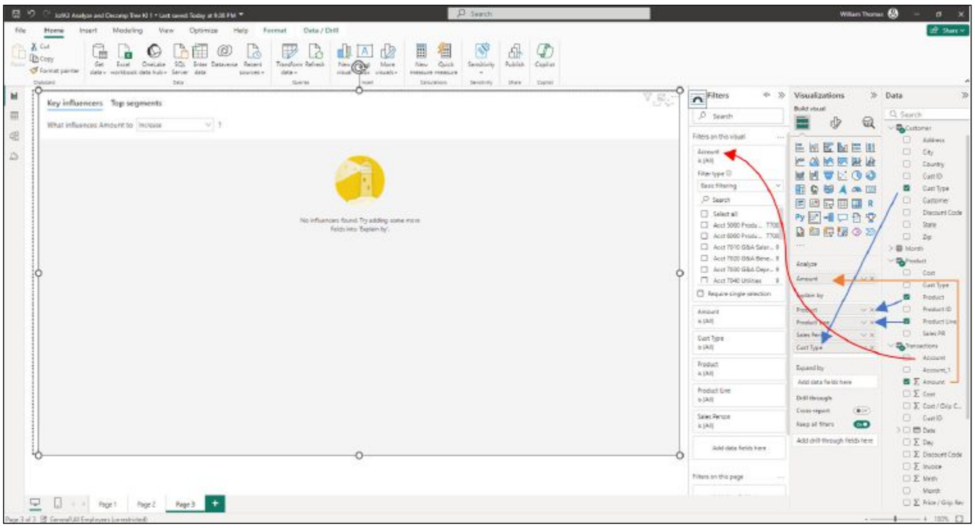
In the following example, we will use "Key Influencers" to determine "What (attributes) influence (sales) amounts to increase?"

Construct a "Key Influencers" visualisation by:

- Adding another page (click the "+" to the right of "Page 2" at the bottom left of the screen to add "Page 3" as illustrated previously).
- Click on the blank canvas area. Select and click on the "Key Influencers" visualisation icon under the "Visualization" pane in the "Decomposition Tree: Comparison Mo 4 April to Mo 5 May" screenshot.
- Expand the visualisation area as done previously by left-clicking on the right angle at the bottom right of the blank visualisation and drag down and to the right. (Refer back to the "Page 2 'Decomposition Tree'" screenshot, if needed.)

As changes are added, the "Key Influencers" begins to take shape. (See the screenshot "Construction of Key Influencers Visualisation".)

Construction of key influencers visualisation

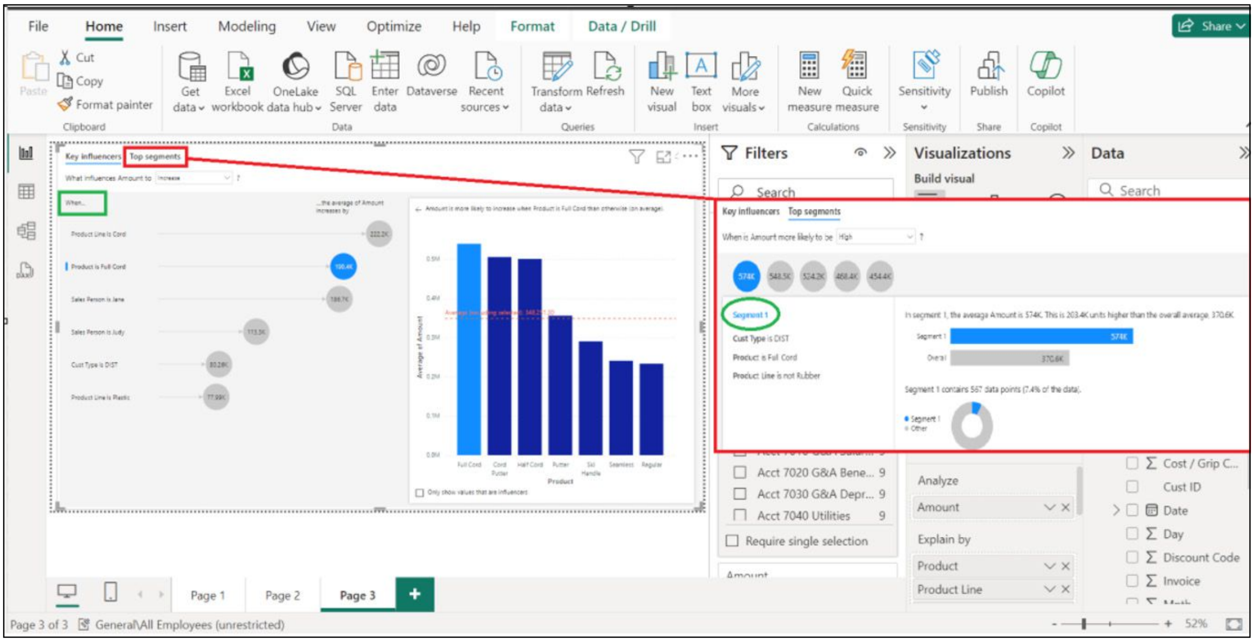


Because the goal is to "Analyze" (sales) amount, left-click, drag, and drop the "Amount" field under the "Transactions" file and release in the "Analyze" box reading "Add data fields here" located in the "Visualizations" pane (shown in the screenshot "Construction of Key Influencers Visualisation" with the orange line and arrow).

- To select the attributes by which sales amount will be influenced, left-click, drag, and drop the "Product" and "Product Line" fields from the "Product" file to the "Explain by" box (shown by the blue arrows in the screenshot "Construction of Key Influencers Visualisation").
- Repeat the process to click, drag, and drop the:
  - "Sales Person" field from the "Transactions" file.
  - "Cust Type" and "Customer" fields from the "Customer" file.
  - The "Account" field from the "Transaction" file to the "Filters" pane under "Filters on this visual" in a blank "Add data fields here" box (shown in the screenshot "Construction of Key Influencers Visualisation" with the curved red line).
  - Select "Basic filtering" under "Filter type."
  - Click on "Acct 5000 Product Sales" to filter the data. (Since we are analysing influencers on all sales, we will not restrict the visualisation to the month of May.)

The "Key Influencers" visualisation is shown in the "Key Influencers Visualisation: Top Segments" screenshot. Note the visualisation created shows "What influences Amount to" either "increase or decrease" Amount. On the left side of the visualisation, under the "When" column shown in the green box, find "Product is Full Cord" and click on the circle that shows "190.4K" to the right of the arrow on the same line. The resultant graph to the right shows "Full Cord's" impact on increasing sales. The visualisation indicates "When Product is Full Cord the Average of Amount Increases by 190.4K." Other "influencers" are also shown.

Key influencers visualisation: Top Segments



The previous screenshot also shows the "Top Segments" selection result, which are combinations of attributes and values that make up the segment identified.

To see the "Top Segments":

- Click on "Top Segments" shown in the red box at the top. Note that five segments are shown with "Average of Amount" and "Population Count" statistics.
- Next, click on the blue circle with "574K" inside (associated with the "Segment 1" observation).

The result (shown in the large red box in the screenshot "Key Influencers Visualisation: Top Segments") indicates group or segment influences. For example, "Segment 1" depicted in the green circle shows the "Amount is likely to be high" when "Cust Type is DIST, Product is Full Cord, and Product Line is not Rubber". The impact of this combination is 203.4K units (dollars) higher than the overall average, 370.6K. This suggests the most likely way to increase sales is to focus marketing on sales to distributors of full cord products, not rubber. Note that segments are defined when an attribute exists (example "Cust type is DIST") and also when an attribute does not exist (example "Product Line is *not* rubber").

In summary, through using Power BI's built-in AI, we could determine:

- Canadian Golf and Tennis was the customer with the largest decline in sales between April and May (using the "Analyze" feature).
- The product line and product from which Canadian Golf and Tennis showed the greatest sales reduction were "Cord" and "Full Cord", respectively.
- The most profitable ways in which we could compensate for a future reduction in sales would be to market "Full Cord" product to customer type "Distributor".

Note that other observations and interpretations could also be made using the previous analysis.

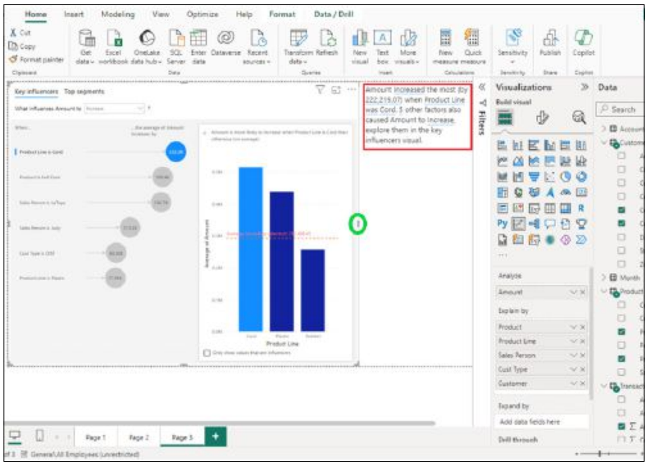
Smart Narrative

Assisting with the writeup

Power BI can quickly provide a text summary of all visualisations on a page or a selected visualisation on a page using "Smart Narrative" to explain results in natural language. Using the previous visualisation:

- Select the visualisation (left-click) and then right-click. A box appears with several options.
- Click on the "Summarize" option. Power BI provides two narrative type choices, "Copilot" and "Custom".
- Select "Custom" and the summary appears.
- Resize the key influencers visualisation by right-clicking on the tab highlighted in the green circle and dragging to the left. (See the screenshot "Smart Narrative Visualisation".) Position the summary in the blank area created.

Smart Narrative visualisation

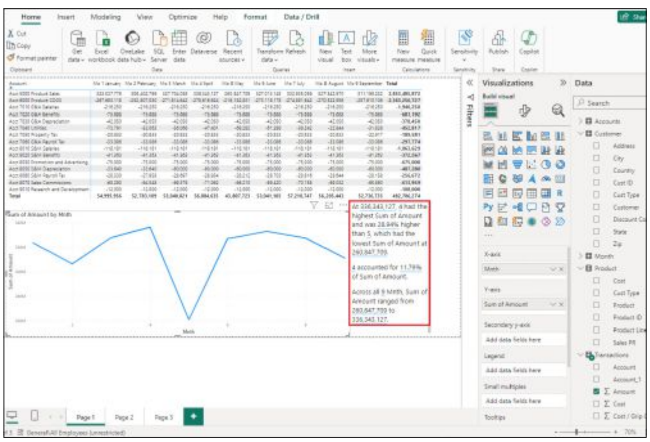


For a more detailed example:

- Return to “Page 1” (by clicking on the “Page 1” tab at the bottom of the screen).
- Create space on the canvas by sizing down the income statement “Matrix” visualisation (click on the visualisation, click on the left sidebar, then drag to the left to make an open space — similar to the previous steps to “Resize the Key Influencers Visualisation”).
- Left-click on the open space created, then left-click and select the “Narrative” visualisation icon.
- Select “Custom” and the summary narrative for the line chart appears.

Note that the summary is dynamic and can be modified by selecting different data in the visualisations on the page. (See the screenshot “Smart Narrative Visualisation: Sales Summary”.)

Smart Narrative visualization: Sales summary



While answers to the significant decline in sales from April to May were resolved quickly early on using Power BI’s AI, the examples that followed aid in discovering more facts about what led to the decline as well as to what influences an increase or decrease.

These are just a few examples of powerful AI features that can significantly aid the work of management accountants using data analytics. ■

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Articles

“Tips for Using the Power BI Suite of Tools”, *FM* magazine, 22 February 2024

“BI Tools: Power Query, Power Pivot, and Power BI”, *FM* magazine, 4 January 2024

“5 Steps to a Digitalised Reporting Dashboard”, *FM* magazine, 14 September 2022

“Are You Telling a Story With Data? You Should Be”, FM magazine, 13 September 2022

“Power BI: An Analytical View”, *Journal of Accountancy*, 1 March 2020

IMAGE BY MINTBLAK/ADOBE STOCK

Capital investment decisions: How to evaluate against the UN SDGs

A flexible four-stage process can help align investment decisions with the UN's Sustainable Development Goals, using ESG indicators and companies' knowledge.

By Giacomo Pigatto, Ph.D.; Lino Cinquini, Ph.D.; Andrea Tenucci, Ph.D.; and Maria Serena Chiucchi, Ph.D.

The United Nations' 2030 Agenda for Sustainable Development seeks to end poverty, hunger, and inequality, while also spurring economic growth and addressing environmental threats. If the world wants to meet the agenda's ambitious aims, the private sector must play its part by achieving the far-reaching targets of the UN's Sustainable Development Goals (SDGs).

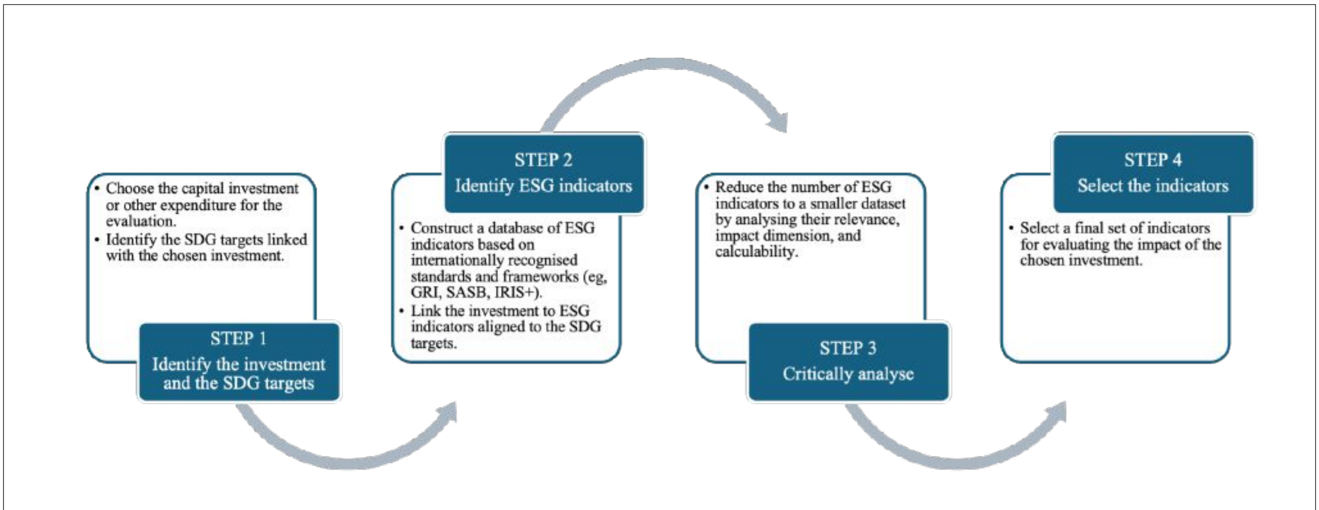
Though many companies have voiced commitment to the agenda, only a small number are actually measuring their performance against the SDGs. One reason companies may be slow to engage with the SDGs is because they may not yet have a measurement framework in place.

Our CIMA-sponsored research, *Integrating the SDGs Into Capital Investment Decisions*, provides companies with a practical four-step process for evaluating how their decisions about capital investments align with the SDGs (see the graphic, "Four-Step Process for Capital Investment Decisions"). (For more on the research method, see the sidebar, "The Research Approach".)

1. Identify the investment and the SDG targets

The first step asks companies to define the investment under analysis and evaluate which of the 169 SDG targets it aligns with. Throughout this evaluation, companies ought to focus on the specific targets affected by the investment. As an example, Aspiag Service (one of the companies in the working group for a wider research project) focused on the opening of a new retail outlet and the renovation of an existing one (see the table "Investment Examples Related to Impact Type").

Four-step process for capital investment decisions



Investment examples related to impact type

Type of impact	Definition	Example for Aspiag Service's investment
Direct	The decision to invest generates a variation in the outcome linked to the SDG target that would not occur otherwise.	Achieving by 2030 "full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value" (SDG target 8.5) is directly affected by the decision to build and open a new branch.
Indirect	The variation in the outcome linked to the SDG target is not associated with the decision to invest *per se* but, rather, it is a consequence of corporate policies or other factors that the investment decision merely unlocks.	"Substantially reduce the proportion of youth not in employment, education or training" (SDG target 8.6) is indirectly affected by the policy of hiring a certain percentage of young people amongst the new employees in the new branch.
Uncertain	The relationship between the target outcome and the investment decision is weak or affected by too many other factors.	Constructing a new building may affect the ability by 2025 to "prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution" (SDG target 14.1). However, if the building is far from the sea or even a water stream, the causal relationship is blurred if not absent.

The research approach

Our CIMA-sponsored research, *Integrating the SDGs Into Capital Investment Decisions*, is part of a broader research project on integrating the SDGs into performance measurement systems conducted by the Fondazione Organismo Italiano di Business Reporting in Italy.

Six Italian companies participated in the working group through semi-structured interviews, unstructured interviews, and plenary sessions. During the research, companies and researchers tackled several issues such as:

- Mapping existing methodologies, tools, and practices — where present — for translating the SDGs' macro-level objectives and targets into manageable micro environmental, social, and governance (ESG) indicators;
- Developing practice-oriented methodologies, tools, and practices; and
- Generalising the findings of the research to propose a useful, practical methodology for accountants to integrate the SDGs into capital investment decisions.

Eventually, the working group proposed a four-step process usable for any corporate investment:

1. Identify the investment and the SDG targets;
2. Identify the ESG indicators;
3. Critically analyse the ESG indicators; and
4. Select the ESG indicators.

ESG indicators are generally already well known by companies.

2. Identify ESG indicators

The second step is about composing a dataset of ESG (environmental, social, and governance) indicators from the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the IRIS+ databases.

Specifically, the GRI document *Linking the SDGs and the GRI Standards* provides a series of alignment tables between the SDG targets and the different GRI standards.

In addition, in the Aspiag Service case, the company chose accounting metrics contained in the SASB standards to analyse its investments for the following industries: engineering and construction services; food retailers and distributors; home builders; multiline and specialty retailers and distributors; real estate; real estate services; and water utilities and services.

Lastly, the IRIS+ website provides the IRIS 5.3 Taxonomy, which details the alignment of each of the 17 SDGs and their 169 targets with IRIS+ metrics.

From these three sources, a company can draw together a wide selection of ESG indicators and choose the most suitable ones for its investments.

3. Critically analyse the ESG indicators

In the third step, Aspiag Service reviewed the ESG indicators in its dataset. It retained only those that met three criteria:

1. Coherence with investment objective; ie, the selected indicators align with the investment's purpose.
2. Availability of information: The retained indicators have accessible data.
3. Linkability to one of the five dimensions of impact:
   - **What:** Describes the positive or negative outcome the enterprise contributes to and its importance to stakeholders;
   - **Who:** Identifies the stakeholders experiencing the outcome and their level of underservice;
   - **How much:** Quantifies the number of stakeholders affected, the degree of change, and duration of impact;
   - **Contribution:** Assesses whether the enterprise's efforts led to better outcomes than would have occurred otherwise; and
   - **Risk:** Considers the likelihood of impact differing from expectations.

Even though an ESG indicator can be linked to a specific SDG target, the indicator may not necessarily link to the investment selected. For example, an ESG indicator measuring the volume of bulk goods transported by road, rail, port, or airport is linked with SDG target 13.1, "Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries." However, such an indicator is not coherent with Aspiag Service's investment in opening or renovating a retail outlet. Moreover, reflecting on which dimension of impact — what, who, how

Examples of indicators analysed by Aspiag Service

SDG target	Type of impact	Database	Indicator	Relevance	Impact dimension	Calculability
7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	Direct	SASB — Multiline and Specialty Retailers & Distributors	Total energy consumed	Yes	What	Yes (investment level)
		IRIS+	After-sale Client Support (PI4180)	No	-	-
		IRIS+	Energy Generated for Sale: Renewable (PI5842)	Yes	What	No
8.6: By 2030, substantially reduce the proportion of youth not in employment, education, or training	Direct	GRI	Total number and rate of new employee hires during the reporting period, by age group, gender, and region (401-1-a)	Yes	Who	Yes (investment level)

much, contribution, and risk — a certain indicator measures should help companies understand their investment impact more clearly.

Lastly, not every indicator has corresponding data available at the investment level, which would make its selection irrelevant. (See the table "Examples of Indicators Analysed by Aspiag Service".)

4. Select the ESG indicators

In this last step, Aspiag Service selected 11 indicators from those deemed coherent, associated with an impact dimension, and with available information. These indicators included expenditures in cultural and natural heritage preservation, greenhouse gas emissions, energy efficiency, and direct economic value created for different stakeholders.

Translating the SDG targets into ESG indicators

ESG indicators are generally already well known by companies. This four-step process enables SDG targets to be traced back to those indicators. When used with thought and deliberation, the GRI, SASB, and IRIS+ databases are a remarkable source of indicators that can be used and adapted to the contextual information needs. Therefore, the four-step process not only provides a sequence of activities to utilise skills and information already present in companies, but it also provides a flexible approach that can cater to any capital investment or other expenditure.

Additional challenge

Deciding where and when to stop the chain of a given investment's effects is challenging because each investment could generate a cascade of effects. We believe that reasoning about direct, indirect, and uncertain impacts might be key to resolving this conundrum. Moreover, the five dimensions of impact — who, what, how much, contribution, and risk — provide a framework for gaining a holistic understanding of any investment's social and environmental impact. This allows management to focus on the most relevant impacts generated by the investment without losing sight of any downstream or corporate impacts. ■

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AICPA & CIMA RESOURCES

Article

"Translating the UN's Sustainable Development Goals", *FM* magazine, 1 August 2020

Report

Accounting for the Sustainable Development Goals, AICPA & CIMA, 7 November 2021

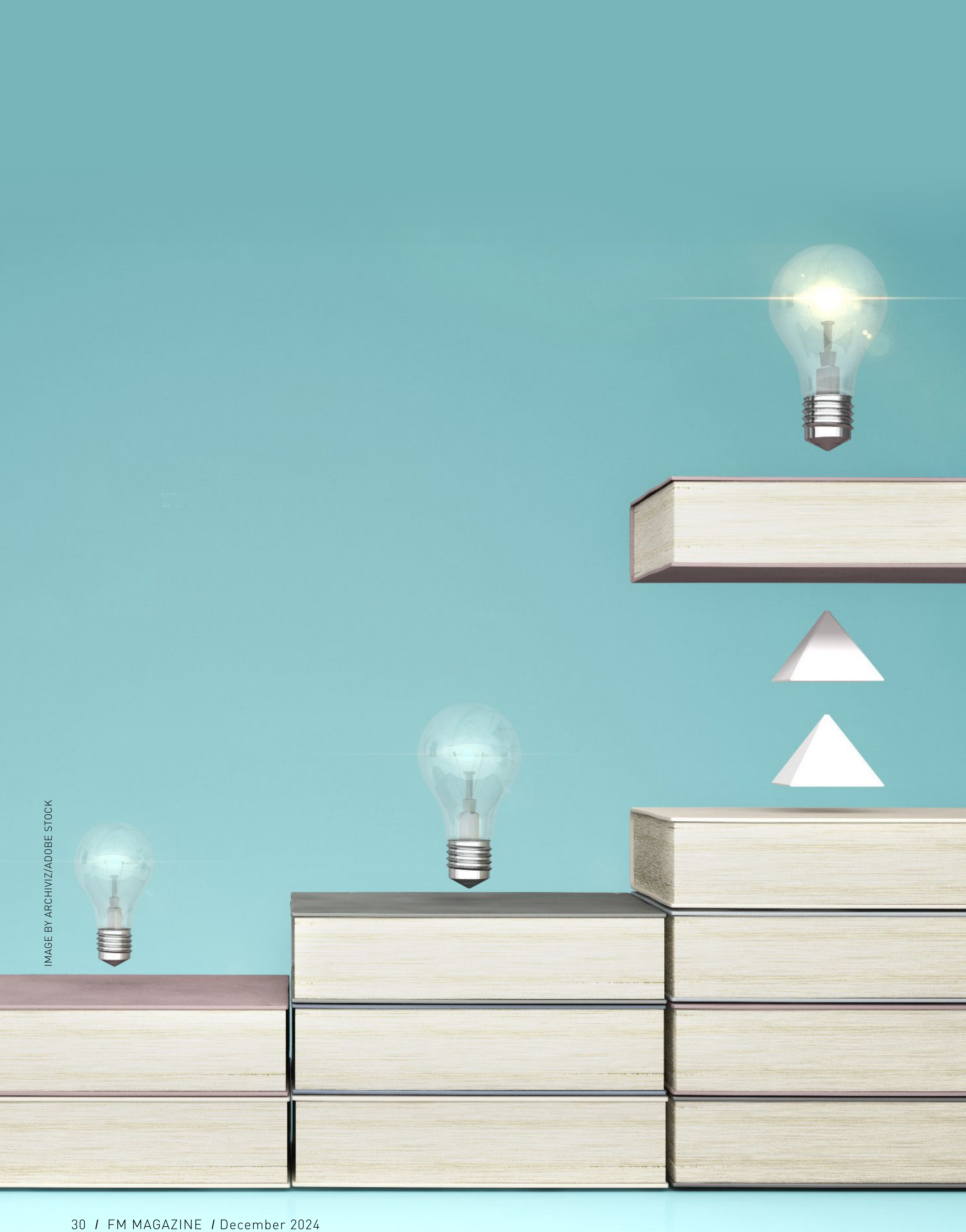

IMAGE BY ARCHIVIZ/ADOBE STOCK

I'm not learning new skills at my company — what do I do?

If your employer doesn't provide learning and development opportunities, follow these steps to ensure your career remains on track.

By Rhymer Rigby

You should always be learning and developing" has become a career mantra over the past few decades, not least because the professional world now changes so fast. But what do you do if your company doesn't support you in this? How do you ensure that your skills and knowledge stay up to date and relevant — and that you fulfil CPD or CPE requirements — if your organisation is too busy to help or does not want to help?

Consider how to start

Professional development is increasingly the individual's responsibility, so be proactive and take a look yourself at the areas you need to develop. Look on the company's intranet. Speak to HR. Speak to colleagues and people in other departments. Think about your career goals and what is needed to achieve them. Consider a coach or mentor and look online and at other resources. You want to put yourself in the best possible position to take advantage of any opportunities that may come your way.

Ask your boss

Just because professional learning opportunities aren't obvious or proactively offered to you doesn't mean they aren't there. Ideally, your boss should be on top of your career development. But in practice, they sometimes may not be. So draw up a list of where you think your skills and knowledge need improving, what you would like, and the benefits for both you and the company. Then ask for a meeting with your boss to discuss the matter.

Is it you?

If your company is developing others, but not you, then you need to discover why. Perhaps it's an oversight, in which case you should move to correct it. But if you have been deliberately placed in a stream where your career is not invested in and you are not seen as a long-term prospect, you must discover the rationale behind this and whether matters can be improved. If there is no prospect of positive change, you will need to consider your options. The same may be true if your company just does not invest in its staff.

Take a step back

There may be understandable reasons why your company is neglecting learning and training. For example, the business might be growing at breakneck speed or might be looking at a new market or merger. Conversely, there may be negative reasons, such as a declining sector or a poor outlook. Whatever the case, it's smart to take a holistic view. If the business is growing very fast, you might decide to worry less about structured professional development for the time being and instead focus on new projects or other opportunities. Working across a variety of roles can be a valuable form of career development, too.

Look beyond your boss and team

Don't worry about going over your boss's head — think of it as taking the initiative. If you do find something that suits, don't be passive aggressive, evasive, or apologetic about it when you do speak with your boss. Just say, "I've become aware that this scheme is available and would really like to take advantage of it. But I wanted to ask you first because I'd appreciate your support."

Look outside the company

If suitable learning opportunities are not available internally, look outside. Outside professional education or training needn't be directly related to your job — it could be more general such as taking a negotiating course, a project management course, or gaining a data science qualification. In all cases, it is worth asking your company to pay for (or at least contribute to) these — not least because there may be funds earmarked for this that are largely forgotten. Make the case that by investing in you, they are investing in your performance, your job satisfaction, and your loyalty. The worst they can do is say no.

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Make a concerted effort to keep up with your industry. Stay abreast of the news that affects your sector, both via traditional outlets and by following influential and interesting people on LinkedIn, X, and industry-specific sites. Look up TED Talks and set up Google alerts. Here, you need to pull off a balancing act — be broad enough in your remit that you're likely to find interesting and unusual new insights, but be selective enough that you don't drown yourself with information. Remember, even if this feels like extra work, it will make you better at your job and, ultimately, more employable.

Network

Do this both online and offline. On platforms like LinkedIn, participate in discussions, comment on posts, and follow influential figures. Offline, join industry groups and go to events and meet-ups. Offline networking is particularly important — there is nothing like talking to people face to face to gain new perspectives and insights and, indeed, to bring new opportunities your way. In the digital age, the power of physical serendipity is often forgotten.

Try to cultivate this within your job, too. If someone is needed to visit a client or attend a conference, put yourself forward. And join nonwork groups at work — becoming part of the company orchestra or baseball team may not feel like learning, but it's likely to bring you into contact with people you wouldn't otherwise meet who will have interesting views and outlooks. Even if your business won't pay for formal development, you can expand and enrich your job.

Look at extracurricular roles

In a related vein, sitting on the board of a charity or a local organisation may not feel like professional development and learning. But finance and accounting professionals are particularly in demand here and have a skillset that is widely valued. You give something, but you get something back, too — you'll be picking up new skills, learning your way around a new organisation and systems, and meeting new people with new ideas. This is also the sort of thing that looks very good on your CV.

Look for another job

If your company really isn't delivering the learning, development, and career progression you need, don't despair. You are in a good position to look for another job. Accounting and finance are some of the most portable skillsets there are, and you can afford to take your time and really research potential employers and what they offer. Moreover, when you do start going for interviews, you have a good pitch. You like your present job and company, but you're looking for somewhere you can really grow, learn, develop, and progress. ■

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Rhymer Rigby is an FM *magazine contributor and author of* The Careerist: Over 100 Ways to Get Ahead at Work. *To comment on this article or to suggest an idea for another article, contact Oliver Rowe at Oliver.Rowe@aicpa-cima.com.*

AICPA & CIMA RESOURCES

Articles

"4 Shifts Redefining How Finance Creates Sustainable Value", *FM* magazine, 7 August 2024

"A Rising Demand for Skills and Expanded Collaboration", *FM* magazine, 19 October 2023

"Develop Your Team — or Lose Them", *Journal of Accountancy*, 3 February 2020

Guide

CGMA Competency Framework Guide: Generate Value for Long-Term Success, AICPA & CIMA, 2 February 2020

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Excel modelling: How to implement 3 types of checks

Build in checks to your Excel model early in development to avoid later critical and costly mistakes.

By Liam Bastick, FCMA, CGMA

A so-called Best Practice model should have many qualities, one indisputable feature being robustness, ie, the model should be free from (material?) errors. We may incorporate checks to assist error detection, but other types of checks may be incorporated, too. Indeed, there are three types of tests I would advocate are included in your spreadsheet modelling work.

These are:

- **Error checks:** These checks provide safeguards where the model contains flawed logic or *prima facie* errors, eg, the Balance Sheet does not balance, cash in the Cash Flow Statement does not reconcile with the Balance Sheet, or the model contains **#DIV/0!** errors.
- **Sensitivity checks (sometimes referred to as scenario checks):** These provide a safeguard when the model's outputs are being derived from inputs that are not deemed to be part of the base case. They can prevent erroneous decisions being made using the "Best Case"; and
- **Alert checks:** These are everything else. They flag points of interest to users and/or developers' issues that may need to be reviewed, eg, revenues are negative or debt covenants have been breached.

Many modellers add checks as an afterthought. However, it is usually too late to create them then. While building a model, a developer knows what situations might break a formula. *That is when you should create the check*. When the issue is foremost in your mind, create the check there and then. If you don't, the fundamental risk is that certain tests are forgotten and critical mistakes slip through into your modelling work, leading to poor forecasting, bad planning, and other costly errors.

Let's work through an example. I am going to create the world's simplest Balance Sheet (see the screenshot "Simple Balance Sheet Example").

Simple balance sheet example

	A	B	C	D
1				
2				
3			**$m**	
4		Total Assets	100	
5		Total Liabilities	30	
6		**Net Assets**	**70**	
7				
8		Shareholders' Equity	50	
9		Retained Profits	20	
10		**Total Equity**	**70**	
11				

One thing we all know: Balance Sheets have to balance. Therefore, let me put a check in to ensure it balances (see the screenshot "Simple Balance Sheet With Check").

Simple balance sheet with check

3			**$m**	
4		Total Assets	100	
5		Total Liabilities	30	
6		**Net Assets**	**70**	
7				
8		Shareholders' Equity	50	
9		Retained Profits	20	
10		**Total Equity**	**70**	
11				
12				
13		Balance Check:	TRUE	

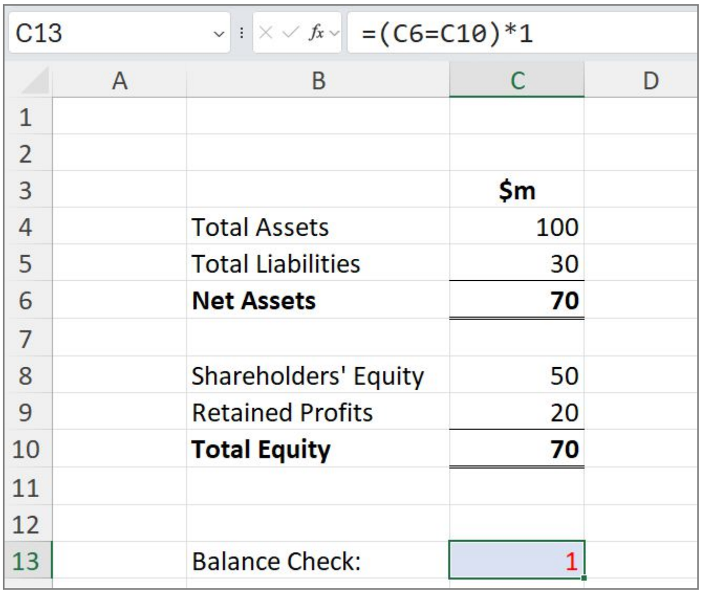
The formula,

=C6=C10

is pretty straightforward, but I don't recommend it. Any financial model I build will have many time periods, and I will need a check for each period. Further, that's just one check out of many. How do you feel about reading through all of your error checks and making sure they all equal TRUE?

It is true you could use a **SUMIF** formula to count all the TRUE responses, but surely there is an easier way. First thing is to put the formula in parentheses and multiply the parenthesised expression by one (see the screenshot "Formula in Parentheses").

Formula in parentheses



The requirement for parentheses (round brackets) is due to the order of operations in a calculation using the BODMAS principle:

B rackets
p O wers
D ivision
M ultiplication
A ddition
S ubtraction

That is, calculations in brackets are performed before raising numbers to powers (computing exponentials), before division, and so on. Be careful though: Excel doesn't quite follow BODMAS, so I tend to use round bracketed formulae quite liberally sometimes.

The problem with this formula is that it will count all the times the Balance Sheet balances. Is it really that informative knowing that your Balance Sheet balances in 9,483 instances? Would it be preferable to learn that you have two errors? Of course it would. This is known as *reporting by exception*. The formula can be revised (see the screenshot "Simple Balance Sheet — Revised Formula").

The "<>" symbol means "is not equal to" so,

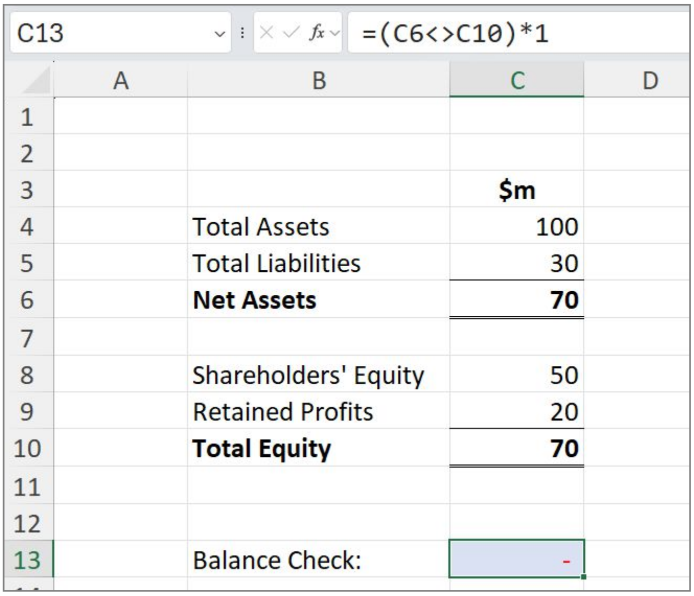
=(C6<>C10)*1

flags (ie, displays a "1") when Net Assets does not equal Total Equity. That sounds good, but this is not quite sufficient either. In additions and other calculations within Excel, sometimes Excel produces minor rounding errors simply due to the way the software has been programmed. This error may occur at the eighth or ninth decimal place and is not caused by the modeller's formula *per se*; it is an anomaly in the coding of Excel itself. To circumvent this, I use the **ROUND** function:

ROUND(number, number_of_digits)

This rounds **number** to **number_of_digits** decimal places, eg, **ROUND(2.928,2)** equals 2.93 (see the screenshot "Using the ROUND Function").

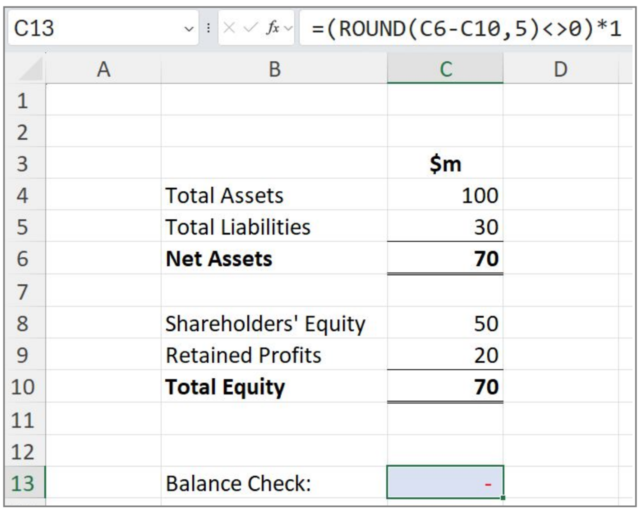
Simple balance sheet — revised formula



C13 =(C6<>C10)*1

	A	B	C	D
1				
2				
3			**$m**	
4		Total Assets	100	
5		Total Liabilities	30	
6		**Net Assets**	**70**	
7				
8		Shareholders' Equity	50	
9		Retained Profits	20	
10		**Total Equity**	**70**	
11				
12				
13		Balance Check:	-	

Using the ROUND function



C13 =(ROUND(C6-C10,5)<>0)*1

	A	B	C	D
1				
2				
3			**$m**	
4		Total Assets	100	
5		Total Liabilities	30	
6		**Net Assets**	**70**	
7				
8		Shareholders' Equity	50	
9		Retained Profits	20	
10		**Total Equity**	**70**	
11				
12				
13		Balance Check:	-	

In this illustration, **=(ROUND(C6-C10,5)<>0)*1** alerts when C6 (Net Assets) does not equal C10 (Total Equity) to five decimal places.

Just before I continue, I am going to be pedantic here — with good reason. There are three hard-coded values in that last formula: 5, 0, and 1. Some hard code (ie, typed in numbers) is acceptable whilst some is not:

- "5" is essentially a variable. In this example, I am rounding to five decimal places, but this could be argued as an arbitrary choice. It is better to have this as an input value and to make its reference clearer, by providing it with a range name, eg, **Rounding_Factor**.
- "0" is not a variable. It is a **constant**. I am testing to see whether the difference between two values (given a **Rounding_Factor** tolerance) is zero. It is not a value I wish to change, therefore, it is not considered to be a **variable** (which should never be hard-coded into a formula). Therefore, this value is acceptable in a formula.
- "1" is also a constant. This converts TRUE or FALSE values to 1's and 0's, respectively, so that they may be added together to determine the number of errors. For this reason, the use of the number 1 in this formula is also deemed acceptable.
  In this example, I will leave hard code in the above formula alone, but perhaps a better practice version of the calculation might be:

=(ROUND(C6-C10,Rounding_Factor)<>0)*1

However, there is still a large issue. What if someone deletes a key reference? (See the screenshot "Example With Deleted Cell Reference".)

Example with deleted cell reference

C13 =(ROUND(C6-C10,5)<>0)*1

	A	B	C	D
1				
2				
3			**$m**	
4		Total Assets	100	
5		Total Liabilities	#REF!	
6		**Net Assets**	**#REF!**	
7				
8		Shareholders' Equity	50	
9		Retained Profits	20	
10		**Total Equity**	**70**	
11				
12				
13		Balance Check:	#REF!	

In the example, the reference in cell C5 no longer exists, giving rise to a **#REF!** error. Unfortunately, this does happen in models. Even if you protect a worksheet (ALT+T+P+P), the end user may still delete the sheet. (Protecting the workbook — ALT+T+P+W — will prevent this, but the workbook can still be deleted.)

Therefore, if someone does manage to accidentally delete a key reference, I would want the error check to alert me accordingly. The problem is, in our example above, while our check may alert us, **#REF!** is not necessarily the ideal way to display this. I would prefer to be alerted using our 1/0 system already utilised (see the screenshot "Adding a *Prima Facie* Check".)

Adding a *prima facie* check

	A	B	C	D	E
1					
2					
3			**$m**		
4		Total Assets	100		
5		Total Liabilities	130		
6		**Net Assets**	**(30)**		
7					
8		Shareholders' Equity	50		
9		Retained Profits	(80)		
10		**Total Equity**	**(30)**		
11					
12		Prima Facie Check:	-		*=IF(ISERROR(C6-C10),1,)*
13		Balance Check:	-		*=IF(C12,,(ROUND(C6-C10,5)<>0)*1)*

Now the checks are becoming more sophisticated. In cell C12, I have added a check and modified the existing one in cell C13. The first check,

=IF(ISERROR(C6-C10),1,)

provides the value 1 if Net Assets less Total Equity may not be evaluated. This is *not* the same as the formula:

=IFERROR(C6-C10,1)

Whilst this formula will provide a value of 1 if the subtraction cannot be evaluated, the alternative is not necessarily 0. This formula is not intended to be my balance check, merely a check to ensure that my balance check will work. If I were to use **IFERROR** rather than **IF(ISERROR)**, the values could be *anything*. I seek a Boolean Utopia: I want values of 0 and 1 only.

Consider the following variant of the formula in cell C13:

=IF(C12<>0,0,(ROUND(C6-C10,5)<>0)*1)

This is the formula I would probably use in a model, as it is easier for users to understand. This checks to ensure that the error check in cell C12 (the *prima facie* check) has not been triggered before checking whether Net Assets equals Total Equity. I wrote the formula in a different way above, ie, **=IF(C12,,...)**, to demonstrate two "shortcuts":

- Putting a cell reference or value in as the first argument in an **IF** statement is the same as checking whether the value is non-zero. All numerical values other than 0 are treated as if they were TRUE by Excel, whereas a value of precisely 0 is FALSE.
- Omitting a value (just putting two commas) in this instance is the same as assuming a **Value_if_TRUE** value of zero.

I don't have to stop there — see the screenshot "Adding a Third Check".

Adding a third check

	A	B	C	D	E
1					
2					
3			**$m**		
4		Total Assets	100		
5		Total Liabilities	130		
6		**Net Assets**	**(30)**		
7					
8		Shareholders' Equity	50		
9		Retained Profits	(80)		
10		**Total Equity**	**(30)**		
11					
12		Prima Facie Check:	-		*=IF(ISERROR(C6-C10),1,)*
13		Balance Check:	-		*=IF(C12,,(ROUND(C6-C10,5)<>0)*1)*
14		Insolvency Check:	1		*=IF(AND(C12=0,C13=0),(C6<0)*1,)*

With this third check, it may be getting easier to see why the order of checks is so important.

The formula,

=IF(AND(C12=0,C13=0),(C6<0)*1,)

checks to see if Net Assets are negative, but only if there are no *prima facie* errors in the output *and* the Balance Sheet balances. In fact, this last check is a different type of check. The first two are error checks, ie, these highlight issues that *must* be resolved before the model may be relied upon. Materiality is not relevant. Until these issues are fixed, the model is not calculating correctly.

The simplistic insolvency check, on the other hand, is an example of an alert check. The model is calculating correctly, and there appear to be no *prima facie* errors. However, if actuality coincides with the forecast, your business will become insolvent (when you have more owed than you can pay).

This whole idea may be extrapolated further — see the screenshot "Incorporating Checks Across Periods of Time".

Incorporating checks across periods of time

	A	B	C	D	E	F	G	H	I
1									
2					**2024**	**2025**	**2026**	**2027**	**2028**
3					**$m**	**$m**	**$m**	**$m**	**$m**
4		Total Assets			100	100	100	140	185
5		Total Liabilities			30	130	90	100	130
6		**Net Assets**			**70**	**(30)**	**10**	**40**	**55**
7									
8		Shareholders' Equity			50	70	30	10	40
9		Retained Profits			20	(100)	(20)	30	15
10		**Total Equity**			**70**	**(30)**	**10**	**40**	**55**
11									
12		Prima Facie Check:	-	*=MAX(E12:I12)*	-	-	-	-	-
13		Balance Check:	-	*=MAX(E13:I13)*	-	-	-	-	-
14		Insolvency Check:	1	*=MAX(E14:I14)*	-	1	-	-	-

In this illustration, I have demonstrated how checks may be incorporated across periods of time. The checks in cells E12:I14 are similar to those described already, but the checks in column C are new. These are aggregator checks, summarising issues across their respective rows. The formula used in cell C12 could be:

=MIN(SUM(E12:I12),1)

but it is simpler to use:

=MAX(E12:I12)

These checks could be linked to an overall Error Checks worksheet at this stage, or else there may be one additional step to take (see the screenshot "Creating an Overall Check").

Creating an overall check

	A	B	C	D	E	F	G	H	I
1									
2					**2024**	**2025**	**2026**	**2027**	**2028**
3					**$m**	**$m**	**$m**	**$m**	**$m**
4		Total Assets			100	100	100	140	185
5		Total Liabilities			30	130	90	100	130
6		**Net Assets**			**70**	**(30)**	**10**	**40**	**55**
7									
8		Shareholders' Equity			50	70	30	10	40
9		Retained Profits			20	(100)	(20)	30	15
10		**Total Equity**			**70**	**(30)**	**10**	**40**	**55**
11									
12		Prima Facie Check:	-	*=MAX(E12:I12)*	-	-	-	-	-
13		Balance Check:	-	*=MAX(E13:I13)*	-	-	-	-	-
14		Insolvency Check:	1	*=MAX(E14:I14)*	-	1	-	-	-
15			1	*=MAX(C12:C14)*					

Here, I have created an overall check for this section. The check in cell C15 summarises the checks in column C above it, using a similar construct of the **MAX** function to create a check that may only ever be 1 or 0.

Adding conditional formatting, number formatting, and wingdings font whilst removing gridlines arguably makes for more elegant aesthetics (see the screenshot "Adding Conditional Formatting").

Adding conditional formatting

	A	B	C	D	E	F	G	H	I
1									
2					**2024**	**2025**	**2026**	**2027**	**2028**
3					**$m**	**$m**	**$m**	**$m**	**$m**
4		Total Assets			100	100	100	140	185
5		Total Liabilities			30	130	90	100	130
6		**Net Assets**			**70**	**(30)**	**10**	**40**	**55**
7									
8		Shareholders' Equity			50	70	30	10	40
9		Retained Profits			20	(100)	(20)	30	15
10		**Total Equity**			**70**	**(30)**	**10**	**40**	**55**
11									
12		Prima Facie Check:	☑	*=MAX(E12:I12)*	☑	☑	☑	☑	☑
13		Balance Check:	☑	*=MAX(E13:I13)*	☑	☑	☑	☑	☑
14		Insolvency Check:	☒	*=MAX(E14:I14)*	☑	☒	☑	☑	☑
15			☒	*=MAX(C12:C14)*					

It will be a preference call, whether to include checks on a row-by-row basis or rather on an overall section basis (just be consistent), but these checks may then be summarised on an overall error checks worksheet (see the screenshot "Overall Error Checks Worksheet").

Overall error checks worksheet

Error Checks Overall:	☑		
1. Error Checks			
Summary of Errors			
Assumptions			
General			
		Include?	
All Months included?	☑	Yes	☑
Division 1			
Annual Balance Sheet free of errors	☑	Yes	☑
Annual Balance Sheet balances	☑	Yes	☑
Annual Balance Sheet solvent	☑	Yes	☑
Annual Operating Cash Flows reconcile	☑	Yes	☑
Annual Restated Balance Sheet free of errors	☑	Yes	☑
Annual Restated Balance Sheet balances	☑	Yes	☑
Annual Restated Balance Sheet solvent	☑	Yes	☑
Annual Restated Operating Cash Flows reconcile	☑	Yes	☑
External Revenue Cash Receipts OK	☑	Yes	☑
Spare Cash Receipts OK	☑	Yes	☑
Materials and Sundry Cash Payments OK	☑	Yes	☑
Subcontractor Cash Payments OK	☑	Yes	☑
Plant Hire Cash Payments OK	☑	Yes	☑
Salaries & Wages - Productive Cash Payments OK	☑	Yes	☑
Salaries & Wages - Unproductive Cash Payments OK	☑	Yes	☑
Repairs & Maintenance Cash Payments OK	☑	Yes	☑
Fleet Costs Cash Payments OK	☑	Yes	☑
Admin & Overheads Cash Payments OK	☑	Yes	☑
Corporate Overhead Recoveries Cash Payments OK	☑	Yes	☑
Spare Cash Payments OK	☑	Yes	☑
Summary of Errors			☑

This screenshot is from a sanitised version of a real-life financial model. The first column of checks are merely links from checks built throughout the model — but hyperlinked, so that if the end user clicks on either this column or the second column of checks, they will be taken back to the source. Do remember that the destination cell of a hyperlink should be given a range name, eg, **HL_Check01**, in case the destination worksheet is renamed.

A Yes/No data validation list separates the two columns of checks, with a "No" making the check OK in all situations. This is fine during model development as construction can generate interim model errors (eg, the Balance Sheet does not balance), but all *error* checks should be switched on prior to a model being used operationally.

Finally, the summary of error checks at the foot of the screenshot is the overall check for the model. It is this one that is linked to the overall check at the top of each worksheet. This should also be a hyperlink, so not only do you have a hyperlink to the Table of Contents for each worksheet, but you also have immediate access to the Error Checks worksheet. ■

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In this webcast, we will focus on debugging and troubleshooting complex formulas. You will learn various techniques that will assist you in creating complex compound formulas. You will also learn methods to resolve issues when you receive errors.

WEBCAST

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"How Excel Builds on Basic Principles to Assist Forecasting", *FM* magazine, 28 August 2024

"6 Ways to Create Scalable Financial Models in Excel", *FM* magazine, 21 June 2024

"ChatGPT: Use Cases and Limits to Its Reliability", *FM* magazine, 2 May 2024

Liam Bastick, FCMA, CGMA, FCA, is director of SumProduct, a global consultancy specialising in Excel training. He is also an Excel MVP (as appointed by Microsoft) and author of Introduction to Financial Modelling *and* Continuing Financial Modelling. *Send ideas for future Excel-related articles to him at liam.bastick@sumproduct.com. To comment on this article or to suggest an idea for another article, contact Oliver Rowe at Oliver.Rowe@aicpa-cima.com.*

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Ways to customise supply chains to reduce risk

To make supply chains more resilient, finance needs to consider its use of data, demand surge management, sustainability, and supply chain finance options.

By Richard Bruce, Ph.D.; John Cullen, FCMA, CGMA; and Srini Burra

PHOTO BY AN QI WANG/ADOBE STOCK

Supply chain disruptions brought on in recent years by war, climate change, and shipping delays have companies taking a closer look at how to better handle emerging and potentially costly supply chain risks outside of their control.

Coming out of the COVID-19 pandemic, companies recognised the limitations of the traditional just-in-time (JIT) inventory management method, devised in the 1970s to eliminate overhead costs, reduce warehousing needs, and increase efficiency. In today's business environment, refreshing supplies only as needed risks having empty shelves and losing business.

Establishing buffer or safety stocks, also known as just-in-case (JIC) inventory management, makes for a more robust supply chain, which is why companies have shifted towards a more stock-focused approach.

Our interviews with industry experts from the manufacturing, retail, fast-food, and service sectors suggest companies not only apply JIT and JIC inventory management methods strategically but also customise their supply chains. This is done, for example, by finding alternatives to scarce supplies or finding multiple suppliers for one item in different countries. That is seen as a more robust way forward than adopting JIC strategies wholesale, considering the practicalities and cost implications of higher inventory levels.

Customisation has to take into account the cost structure and where the value is in the supply chain. It also aims for unbroken supply, enhanced business resilience, and improved contingency planning. To build the supply chain model that is right for a specific company, all factors that impact the value chain have to be looked at to ensure optimal consumer and customer satisfaction and the desired growth, profitability, and capital efficiency. (See the sidebar, "How to Optimise Supply Replenishment".)

For example, the UK's National Health Service developed its own stock of essential personal protective equipment (PPE). A fast-food operator recognised the need to move from a JIT to a JIC approach, given the exponential growth and disruptions the company experienced, but is very concerned about the capacity of its restaurants to allow higher inventory levels. A global food manufacturer responded by multi-sourcing products, including local sourcing, and investing in automation to manage supply chain issues. And a pizza manufacturer changed its recipes to replace ingredients that were difficult to obtain.

As the examples show, making supply chains more resilient can differ from company to company. But cost efficiency and consumer/customer satisfaction are key drivers regardless of customisation, and interviewees suggested finance consider cost drivers and value propositions.

How to optimise supply replenishment

Best-in-class consumer goods companies design their optimal supply replenishment strategy by balancing cost, sustainability, customer satisfaction, on-shelf availability, and freshness. Execution of the strategy determines the overall costs along the value chain that are right for the company, from buying and holding raw materials to manufacturing and supplying the finished goods.

Best-in-class companies take into account a sequence of seven key factors when deciding whether just-in-time, just-in-case, or something in between is the best approach for the company, consumer, and customer:

1. The importance of a particular portfolio/SKU (stock keeping unit), which is determined by an SKU's shelf life and its profitability for the business.
2. The frequency and velocity of production (daily/weekly/monthly) based on how quickly and how much of the goods are sold.
3. Consumer and customer consumption patterns based on, for example, electronic point-of-sale (ePOS) data from cash registers and how much the company sells to the customer (sell-in) compared to how much the customer sells to the consumer (sell-out).
4. Considerations regarding nodes in the logistics network, such as the location of a factory compared to the location of a distribution centre and customer points of consumption.
5. Current safety stocks across the value chain, which are determined by forecast accuracy (the lower the forecast accuracy, the higher the safety stocks).
6. Current customer ordering patterns and replenishment lead time.
7. Balance of current inventory carrying cost, transportation cost, and sustainability impacts (such as greenhouse gas emissions from truck deliveries) compared to the cost of new replenishment requests.

Data management and collaboration

Data transparency throughout the value chain, from the purchase of raw materials to manufacturing and selling the final goods, is crucial to optimise a supply chain.

The more data is available, the better companies can manage supply chain relationships, map dependencies, identify chokepoints in the supply chain, and make informed decisions. Interviewees also highlighted the importance of identifying the pros and cons of JIT and JIC inventory management, using opportunity cost data, and having reliable data sharing in place.

One interviewee stressed the importance of cross-functional analysis and having a well-developed sales and operational planning process for managing supply chain relationships.

Additionally, interviewees from a food manufacturer and a major grocery retailer emphasised the importance of data management and customer collaboration, particularly in cases of sudden and acute demand surges. They also emphasised the importance of data sharing across stressed supply chains for better utilisation of resources.

A senior data analyst touched on the potential of technology tools for data sharing and open-book accounting. Blockchain-based smart contracts, for example, allow for the secure and anonymous sharing of cost data across the value chain. A Canadian grocery retailer uses blockchain-based smart contracts to resolve discrepancies with logistics suppliers.

Some data marketplaces, which are platforms for trading data, use cryptoassets to incentivise data transparency across the value chain. The senior data analyst was sceptical of those data marketplaces because they leave the quality assurance of the data entirely to community dynamics.

LEARNING RESOURCES

Supply Chain Overview

This course will cover several supply chain topics in the global business environment. Detailed use cases include supply chain processes, globalisation, supplier issues, value chain, and financial considerations.

COURSE

Distribution Channels

This course will enable you to apply global distribution interactions and understand how channel management can reduce errors and increase productivity to deliver customer satisfaction.

COURSE

Product prioritisation

During the pandemic, some manufacturers, facing difficult issues related to workforce availability and supply chain shortages, had to inform customers that they were having to reduce the range of SKUs (stock-keeping units) available. For example, these manufacturers limited the package sizes of certain products or stopped selling difficult-to-source products that were in low demand.

Restrictions on daytime deliveries in cities led fast-food chains to product prioritisation. The limited space available in the delivery vehicle meant that they figured in the optimum product mix to be included to satisfy most customers, even though certain products were significantly reduced in volume or omitted altogether, to maximise profitability.

Post-pandemic, product prioritisation has, in some cases, led to a more flexible and responsive approach to product manufacturing.

Sustainability considerations

Behavioural changes are accompanying the conceptual changes in supply chain management. Awareness of climate change and its environmental contributions, such as greenhouse gases, has increased. As a result, companies are moving away from disposable products, incentivising suppliers to be more sustainable, and generating revenue streams from reusing and upgrading products.

Swedish furniture retailer IKEA, for example, started buying back its used furniture and selling it second-hand at a discount but above acquisition cost. In the UK, some high-street businesses are adopting similar strategies. Retailer John Lewis announced it is working with retail service provider Timpson on repairing customers' clothing; and retailer Marks & Spencer is working with Sojo, a clothing alteration and repair startup.

These fledgling efforts help companies meet sustainability targets, and they remove waste from supply chains and impact supply chain costs, but it is unclear to what extent such initiatives are mainstreaming.

Companies are incentivising suppliers to be more sustainable.

Supply chain finance

Increasingly, supply chains are regarded as quasi-organisations and, with secure technology and cost data transparency, greater efficiencies can be achieved. To that extent, there has been considerable growth in the utilisation of supply chain finance, where a highly rated customer arranges through a finance house for their tier 1 suppliers to be paid earlier than previously, at a very low discount. The customer retains cash for longer (extending their accounts payable period) without penalising their suppliers.

Enthusiasm for this source of finance, which enables the benefits of early payment to cascade up the supply chain to all tiers, has not been dented by the collapse of Greensill Capital. The finance house used supply chain finance to cover "prospective receivables" — leading to the collapse of the company and eventually the demise of Credit Suisse as a separate entity. The UK Parliament's Treasury Committee conducted an inquiry into the activities of Greensill, to which this article's lead author gave evidence. Financial reporting disclosures were tightened as a result.

As corporate social responsibility and sustainable resilience are viewed as important, there's also a move to utilise supply chain finance to motivate behavioural change — for example, by offering supply chain finance at a lower discount rate to suppliers who sign up to the customer's ESG (environmental, social, and governance) commitments. ■

Richard Bruce, Ph.D., FCILT, is lecturer in supply chain accounting and finance, and John Cullen, FCMA, CGMA, is Emeritus Professor of Management Accounting — both at Sheffield University Management School in the UK. Srini Burra is former global head of supply chain performance management at Nestlé and honorary ambassador at the Grantham Centre for Sustainable Futures at Sheffield University. To comment on this article or to suggest an idea for another article, contact Oliver Rowe at Oliver.Rowe@aicpa-cima.com.

AICPA & CIMA RESOURCES

Articles

"How to Use Digital Technology to Upgrade Your Supply Chain", *FM* magazine, 6 July 2023

"Untangling the Supply Chain Every Day", *FM* magazine, 4 March 2022

AICPA & CIMA

Together as the Association of International Certified Professional Accountants

Lead change:
Foster environmental stewardship.

Learn more

The Association of International Certified Professional Accountants, powering leaders in accounting and finance around the globe.

Work from home v the office: Finding the balance

Younger employees typically see more advantages in working in the office rather than at home compared with their older colleagues.

By Oliver Rowe

The debate about the merits of work from home (WFH) versus work from the office (WFO) continues. In September, Amazon announced that from January staff would be required to work from the office five days a week.

Internationally, the approach to work locations varies, with employees attending London offices on average 2.7 days a week, New York 3.1 days, and Singapore 3.2 days, according to data from the Centre for Cities thinktank.

There is also a varied picture in terms of employee collaboration, productivity, and innovation — critical elements of successful businesses. Deloitte's *2024 Gen Z and Millennial Survey* found that 24% of Gen Z and Millennials (Gen Y) noticed increased collaboration and social interaction with work colleagues in the office, but nearly a fifth experienced lower productivity in that environment.

A recent study at an India-based IT services company that looked at innovation — measured by the quantity and quality of employees' ideas — found that during a wholly WFH period the quality of ideas decreased and during hybrid working there was a dip in the quantity of ideas. A decrease in innovation was particularly seen in hybrid teams where WFH and WFO were not well coordinated. ■

PHOTO BY SRIJAROEN/ADOBE STOCK

Oliver Rowe is FM *magazine editor-in-chief. To comment on this article or to suggest an idea for another article, contact him at Oliver.Rowe@aicpa-cima.com.*

AICPA & CIMA RESOURCES

Article

"How to Create an Effective Hybrid Workplace", *FM* magazine, 5 March 2024

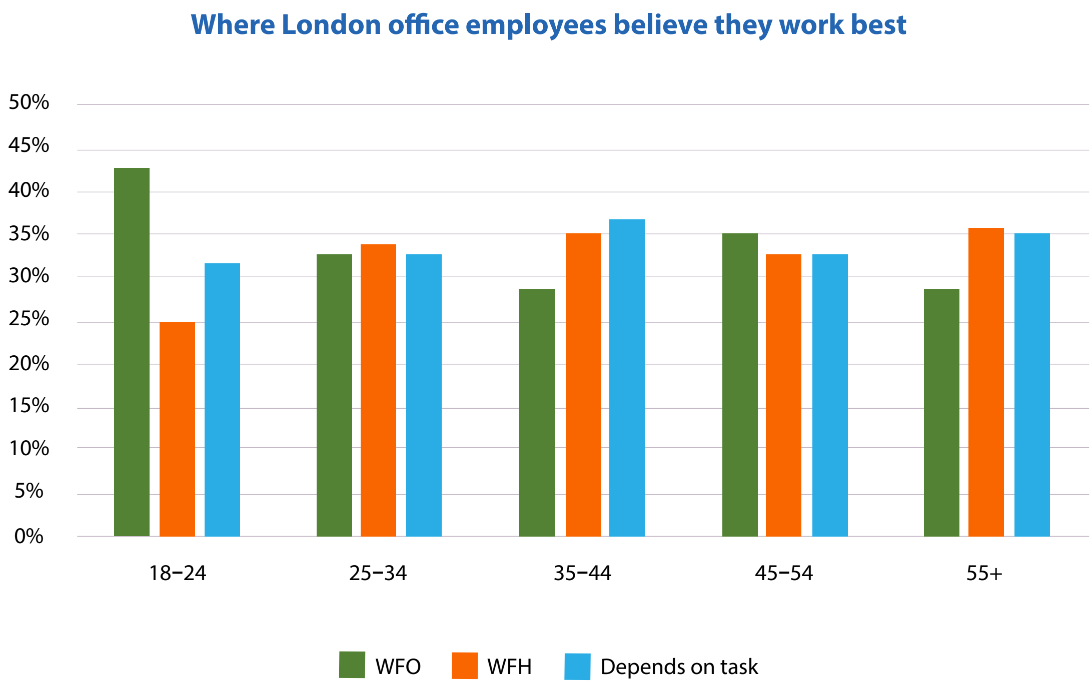
Podcast episode

"Five Tips to Keep Employees Engaged in a Hybrid Work Environment", AICPA & CIMA, 9 March 2023

Briefing

"Finance in the Hybrid Workplace", AICPA & CIMA, 25 June 2023

Finding the optimal work environment



Source: Centre for Cities, *Return to the Office: How London Compares to Other Global Cities, and Why This Matters*. Percentages for some age groups total more than 100% due to rounding.

Return to office: Gen Z and Millennials' pros and cons

Pros	Gen Z	Millennials
More engaged and connected	26%	28%
Better routine and structure	25%	27%
Increased collaboration and social interaction	24%	24%
Face-to-face preference	21%	23%
Cons	**Gen Z**	**Millennials**
Negative financial impact	21%	17%
Decreased productivity	18%	17%
Negative mental health impact	16%	15%
Negative impact on caring responsibilities	14%	11%
Looking to leave role	13%	11%

Source: Deloitte, *2024 Gen Z and Millennial Survey*.

INSTITUTE NEWS

AICPA & CIMA's Contemporary Issues in Management Accounting series

The following research executive summary was recently published in the series of academic research supported by CIMA:

Navigating Net Zero Transition Planning: Recommendations for Management Accountants

This research, conducted by the Metis Institute for Climate Strategy in Singapore and the University of Dundee in Scotland, looks at climate transition planning aimed at limiting the increase in global temperature to no more than 1.5°C as set out in the 2015 Paris Agreement.

The study focuses on two major financial hubs, the UK and Singapore, combining document analysis and observations from a case company.

Key challenges identified include data limitations, establishing clear purpose and ownership, and the need for further guidance for conglomerates. The study also emphasises the critical role of management accountants in transition planning and the necessity of becoming climate-literate.

The report underscores the iterative and cross-functional nature of transition planning and the importance of enhancing datasets over time. It aims to help companies navigate common challenges and take their first steps in this crucial process.

Agreements signed with Hong Kong institutes

CIMA and the Hong Kong Institute of Certified Public Accountants (HKICPA) have entered into a new five-year agreement to accelerate the growth of the accounting and finance profession in Hong Kong by approving mutual examination paper exemptions from both CIMA's CGMA Professional Qualification and the HKICPA Qualification Programme.

Andrew Harding, FCMA, CGMA, chief executive–Management Accounting at AICPA & CIMA, said: "We are very proud of what we have achieved through our collaboration over the past few decades. This new agreement will enable us to continue to support a growing number of aspiring accounting and finance professionals in Hong Kong to maximise their potential and achieve their professional goals."

Margaret Chan, chief executive and registrar of HKICPA, said the agreement "further opens up opportunities for HKICPA members to become CIMA members, easing their path to gain another world-leading qualification and strengthening their competitiveness".

Also in Hong Kong, AICPA & CIMA, together as the Association of International Certified Professional Accountants, and the Hong Kong Institute of Human Resource Management (HKIHRM) signed an agreement to support HR professionals in Hong Kong and equip them with business and finance skills.

Through the agreement, HKIHRM members can access a range of AICPA & CIMA online and self-study courses on topics such as finance for nonfinance professionals, remote leadership, workplace communication, and cybersecurity.

TOP LEFT: PHOTO BY MOODBOARD/ADOBE STOCK; BOTTOM RIGHT: PHOTO BY TTSTUDIO/ADOBE STOCK

2024 CGMA Leadership Academy hosted in Kuala Lumpur

The fourth CGMA Leadership Academy took place in Kuala Lumpur, Malaysia, in early October.

Over four days, 30 CGMA designation-holder participants had access to curated content, high-profile speakers, live case study discussions, and knowledge-sharing roundtables on topics such as ESG and business sustainability, digital transformation and AI, effective communication and interpersonal skills, leadership, and how to foster resilience.

Venkkat Ramanan, FCMA, CGMA, vice-president of Asia Pacific at AICPA & CIMA, together as the Association of International Certified Professional Accountants, said: "[The] rapidly changing landscape demands that we foster leaders with innovative thinking, resilience, and forward-looking approach to business strategy." He added that the programme was designed to ensure that attendees "walk away with actionable insights and elite leadership skills".

Nominations to the 2025–2026 Association Regional Engagement Groups and Management Accounting committees

The Association of International Certified Professional Accountants Nominations Committee, composed of CIMA and AICPA members, will convene in February 2025 to nominate members for the Association's board of directors, its chair, and co-chair and to select committees with terms from June 2025 to May 2026.

These committees include the Management Accounting (MA) committees (Lifelong Learning Committee, CGMA Exam Board, and Thought Leadership and Business Ethics Committee) and the eight Regional Engagement Groups (REGs).

In July 2019, the Association's MA board of directors voted to have all seats for the Lifelong Learning Committee, CGMA Exam Board, and Thought Leadership and Business Ethics Committee determined by the Nominations Management Accounting Subcommittee. CIMA Council approved this resolution in October 2019 with the objective of building a strong pipeline of volunteer talent, providing opportunities for rotation of the Association's broad and diverse membership, and ensuring candidates are fit for purpose.

All individuals interested in serving on the Lifelong Learning Committee, CGMA Exam Board, and/or the Thought Leadership and Business Ethics Committee should complete and submit an online form to ensure a common set of information on each candidate is received.

All individuals interested in serving on the REGs should complete and submit an online form to ensure a common set of information on each candidate is received.

All nominations must be received by 17:00 GMT on 6 January 2025. For questions and inquiries regarding submitting a nomination, please contact the Association's Governance team at VolunteerServices@aicpa-cima.com or one of the following Association staff liaisons:

MA committees

- Lifelong Learning — Stephen Flatman, Stephen.Flatman@aicpa-cima.com.
- CGMA Exam Board — Tracey Fabiyi, Tracey.Fabiyi@aicpa-cima.com.
- Thought Leadership and Business Ethics — Ash Noah, CPA, FCMA, CGMA, Ash.Noah@aicpa-cima.com.

Regional Engagement Groups

- Africa — Tariro Mutizwa, ACMA, CGMA, Tariro.Mutizwa@aicpa-cima.com, and Kerry Smith, Kerry.Smith@aicpa-cima.com.
- The Americas — Tom Hood, CPA/CITP, CGMA, Tom.Hood@aicpa-cima.com, and Ken Witt, CPA, CGMA, Ken.Witt@aicpa-cima.com.
- Australasia — Venkkat Ramanan, FCMA, CGMA, Venkkat.Ramanan@aicpa-cima.com, and Justine Mills, Justine.Mills@aicpa-cima.com.
- Mainland Europe — Jakub Bejnarowicz, Jakub.Bejnarowicz@aicpa-cima.com.
- MESANA — Venkkat Ramanan, FCMA, CGMA, Venkkat.Ramanan@aicpa-cima.com, and Antoinette Jayamohan, Antoinette.Jayamohan@aicpa-cima.com.
- North Asia — Vicky Li, FCMA, CGMA, Vicky.Li@aicpa-cima.com, and Amy Shen, Amy.Shen@aicpa-cima.com.
- South East Asia — Venkkat Ramanan, FCMA, CGMA, Venkkat.Ramanan@aicpa-cima.com, and Antoinette Jayamohan, Antoinette.Jayamohan@aicpa-cima.com.
- UK & Ireland — Paul Turner, FCMA, CGMA, Paul.Turner@aicpa-cima.com.

Candidates will be notified of their status in March 2025.

BOTTOM LEFT: PHOTO BY HAKINMHAN/ADOBE STOCK

Benefit of banks

4 December is designated the International Day of Banks by the UN to mark the contribution of multilateral development banks such as the World Bank, the Asian Development Bank, the African Development Bank, and the European Bank for Reconstruction and Development. The day also recognises the contribution of countries' banking systems to improving people's standards of living.

Banks also have a significant role in lending for climate-related investment. A recent World Bank report highlights how emerging and developing markets can increase this investment — including for climate adaptation, which accounts for only 16% of domestic and international climate finance. The report also warns of over-exposure to sovereign debt in some emerging and developing markets. This debt has grown to the highest level in a decade and is three times higher relatively than in advanced economies.

A storm shelter that doubles up as a primary school is part of the World Bank's Multipurpose Disaster Shelter Project in Bangladesh, backed by $375 million from the World Bank Group with $1.7 million from the Bangladesh government.

PHOTO BY TAPASH PAUL/WORLD BANK