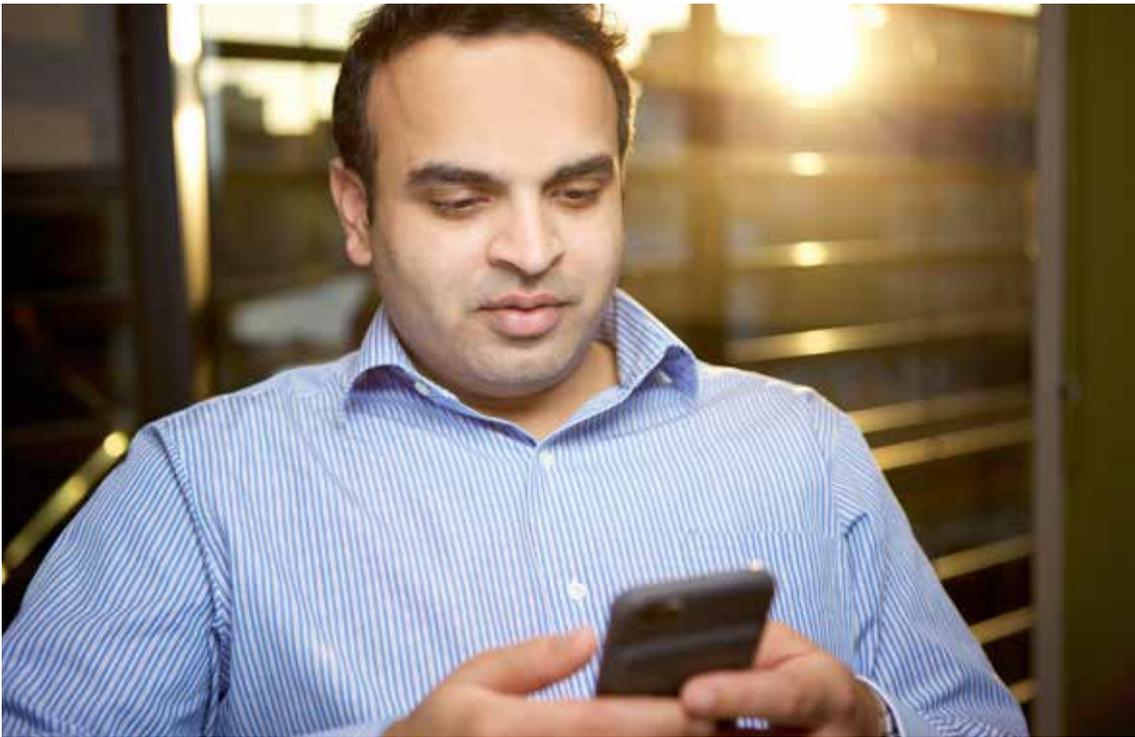


# *Taking a dive* into deep data

*Hermann Sidhu* explains how analytics is revolutionizing the audit and facilitating the introduction of disruptive technologies such as artificial intelligence, machine learning, robotics and blockchain.





**Audit is undergoing** a data revolution. There has been rapid expansion in the types and volumes of data that companies produce, providing richer sources of information to be used when conducting an audit. Digital analytics tools are enabling industry professionals to look at businesses in a different way by analyzing these bigger data populations. This provides a deeper understanding of risk, performance and opportunities.

While data analytics has been used broadly for decades, limitations in computing power, connectivity and cybersecurity have made it challenging to obtain, process and interpret data in a meaningful and consistent way. Now, with the majority of transactions conducted electronically, powerful data analytics tools and techniques enable auditors to analyze more data points than ever before, which can enhance audit quality and confidence in the capital markets.

Being able to analyze larger populations of transactions and data sets means auditors can deepen their understanding of both financial and nonfinancial information. The ability to analyze larger data sets enables auditors to better identify the risks of material misstatement, including risks of fraud.

Such in-depth analysis of higher-risk transactions in banking might, for instance, allow the identification of an unusually high number of credit transactions that, in turn, might indicate errors in their processing, signaling a misstatement.

Audit analytics and risk assessments allow auditors to focus on higher-risk areas. At EY, as part of a global audit engagement, we developed a dashboard using the new analytical tools to

help us identify higher- or lower-risk business areas across regions, as well as to what extent different countries or different entities were susceptible to corruption and regulatory issues. The findings were incorporated into the audit plan to strengthen the audit.

In the coming years, there will be significant use of enhanced analytical tools. Audit professionals will be delving deeper into a combined analysis of structured data, such as financial statements, and unstructured data, such as large volumes of client contracts. They will be able to provide extensive analysis and quality business insights.

Artificial intelligence (AI), machine learning, robotics and blockchain will also have a major impact on the profession. But these technologies all rely on the data. If you don't have the ability to analyze data, you cannot do analytics, you cannot do machine learning, you cannot do robotics and you cannot do blockchain.

AI is expected to provide stronger and more useful tools for auditors to interrogate the data, find anomalies and improve techniques, all of which can lead to higher-quality audits. The real value of machine learning comes from having computers that, over time, understand what "normal" is to an organization and identify what is not.

Digital technology is disrupting the current landscape, giving audit professionals the tools to take a deep dive into data, enabling them to ask better questions and get better answers. ■

*Hermann Sidhu (pictured above) is the EY Global Assurance Digital Leader.*

March 2017

EY | Assurance | Tax | Transactions | Advisory

### **About EY**

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit [ey.com](http://ey.com).

### **About Reporting**

*Reporting*, EY Assurance's insights hub, brings together insights and ideas that will interest, inform and inspire business leaders. It's about more than the numbers, examining reporting in its broadest sense.

Our content is available [online](#) and [in print](#), and is tailored for board members, audit committee chairs and finance directors of global companies. For more information, visit [ey.com/reporting](http://ey.com/reporting).

© 2017 EYGM Limited.  
All Rights Reserved.  
EYG no. 00918-173GBL  
ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax or other professional advice. Please refer to your advisors for specific advice.

The views of third parties set out in this publication are not necessarily the views of the global EY organization or its member firms. Moreover, they should be seen in the context of the time they were made.

**ey.com**