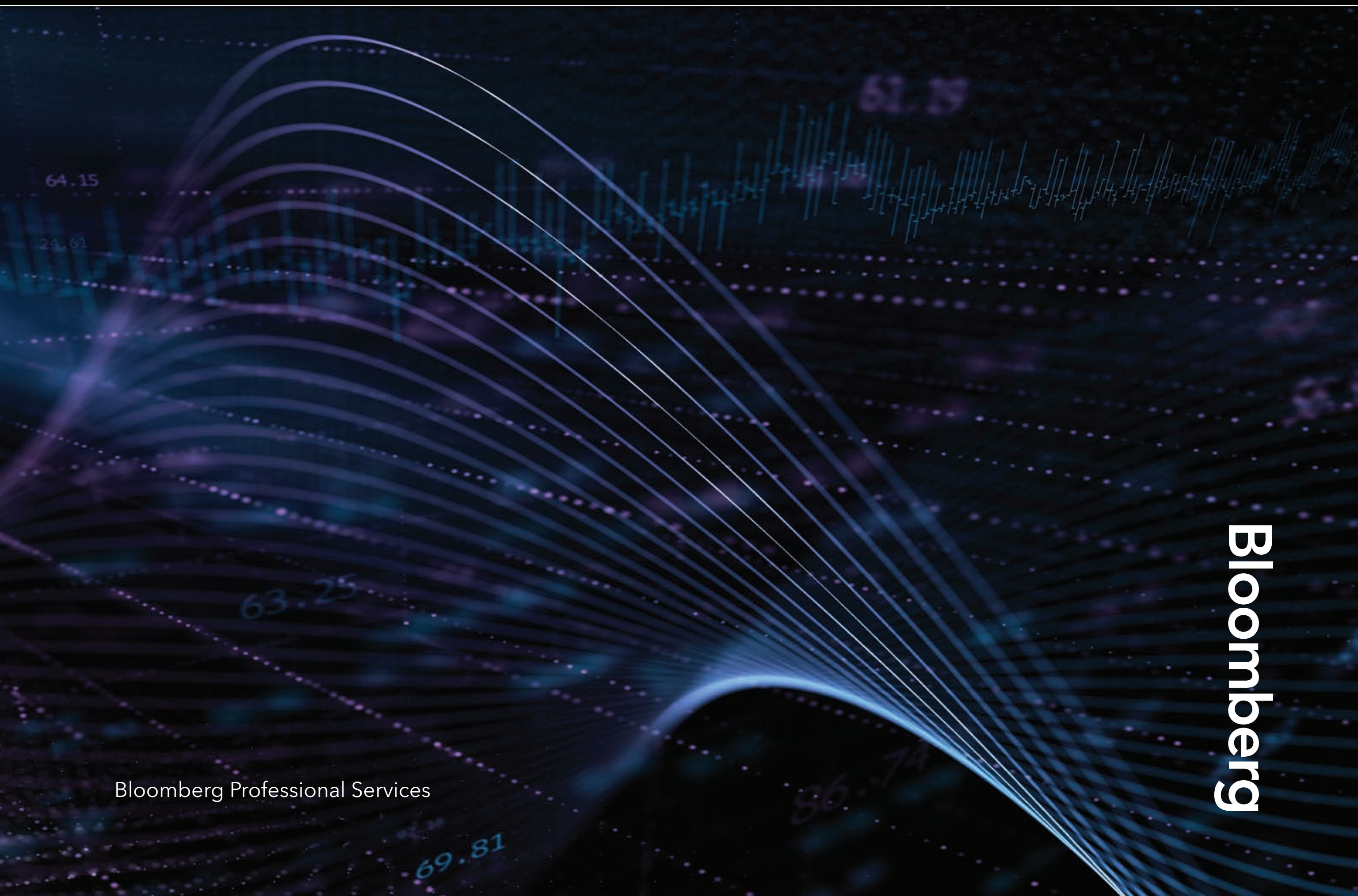
Investment Management

Family office

Special report

Family Offices

Middle East edition



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Investing for generations

Welcome to this special edition of Bloomberg Markets' Special Report for Family Offices, with a regional focus on the Middle East. In this issue we take a detailed look at how Dubai-based Kimera Limited turned to Bloomberg to improve its trading and asset management infrastructure and scale its operations to support multiple families. We also examine the growth of Alea Global Group, a single-family office that has been investing the wealth of Kuwait's Al Duaij family since 1998, and is now expanding its investments beyond the Gulf region into Latin America and Asia.

Elsewhere we reveal BloombergNEF's top 10 trends in energy and transport for 2019, detail the economic outlook for the region in the year ahead, and rank the 25 richest families in the world – who between them control $1.1 trillion of wealth. At the head of the list: the Waltons, the Walmart heirs whose influence, as we also show, can be seen everywhere in their hometown of Bentonville, Arkansas.

Aiming for optimal performance.

How a Dubai family office streamlined its operations – and built a foundation for the future.

Like many families of considerable wealth, the founder of Kimera Limited, a family office founded in Dubai in early 2017, determined that the best way to grow and manage his assets would be to centralize their decisions about estate planning, philanthropy and investing under a family office.

The move toward a family office structure offered the potential to pursue more suitable investment opportunities, reduce investment fees and take a more holistic view of risk and reward. But while establishing a family office was a key first step toward meeting the family's investment objectives, technology was initially a limiting factor.

"The owner has a healthy risk appetite and long-term investment horizon, he believed that if he brought in the right team he could generate higher returns," says Zaid Al-Qaimi, Kimera's Chief Investment Officer, who was previously with the Abu Dhabi Investment Authority (ADIA). "In order for us to execute our strategy, however, we needed the right IT and trading infrastructure."

Sourcing the right infrastructure for real-time exposures & market value

Like many family offices, Kimera had relied on its private banking relationships for trade management and execution. "Because we were working across multiple platforms, the timeliness and quality of information was subpar," Al-Qaimi recalls. "We could never have a live exposure and market value, which, as a family office and portfolio manager, you want to be able to see every day."

To improve its trading and asset management infrastructure and scale its operations to support multiple families, Kimera turned to Bloomberg. Designed specifically for buy-side firms, Bloomberg's Asset and Investment Manager (AIM) offers an integrated solution for portfolio management, trading, compliance and operations. Moreover, it is comprehensive, with access to information and real-time trading across global markets as well as deal-flow and pricing for illiquid investments.

"The same trends that are driving traditional investment managers to adopt robust front office solutions are influencing family offices," says David Strevens, Bloomberg's Regional Manager, Middle East & Africa. Managers of all shapes and sizes are adopting fully integrated systems to navigate increasingly complex markets, and we have been seeing increased interest for our solutions in the Middle East."

For Kimera, the decision to integrate Bloomberg was predicated not just on the immediate benefits but the opportunities down the road. "We considered it an investment," says Al-Qaimi, noting that other families have expressed interest in joining Kimera to create a multi-family office. "We didn't want to put together a short-term solution and then replace it when our assets grow."

Of course, it's one thing to entertain the idea of new investment management systems and quite another to put it to work. This is where human capital and experience matters as much as the underlying technology. It took the team just three months to get AIM up and running. "Bloomberg helped with data collection and collation, integration and testing," he says. "They walked us through everything, including testing complex situations with different asset classes."

Benefiting from trade execution efficiencies

Once Kimera began working via Bloomberg, the benefits quickly came to light. "We saw an improvement in trade execution from the start," he says, noting that the biggest improvements came via reduced trading costs for fixed income and foreign exchange. All facets of trade execution also improved – from market analytics and position management, to trade execution, settlement and reconciliation.

"Prior to this, we would have to call the private banking trading desk, wait for them to get back to us and monitor what kind of pricing they were giving us," he adds, noting that there were situations where trades nearly failed because of trade bottlenecks. "With Bloomberg AIM, we can do it ourselves."

Put simply, Bloomberg's buy-side solutions gave Kimera access to systems that, until recently, were used primarily by large institutions. While many family offices are running on spreadsheets, AIM is designed for scale and advanced technology – making it possible to grow asset bases, expand into new regions and assets classes, and add new accounts, all without disruption. As a hosted platform, it eliminates the need for dedicated workstations, on-premise servers or in-house system upgrades.

AIM also provided more visibility, not just into Kimera's existing portfolio, but a pipeline of opportunities, both in liquid markets and alternatives. "Now that we have an accurate view of our AUM, we can allocate assets and plan our timing far more effectively," he says.

With all the pieces in place for better asset management and trade execution, Kimera is considering expanding to become a multi-family office. With such a structure, multiple families can enjoy the same benefits of centralized and personalized wealth management.

"We considered it an investment – we didn't want to put together a short-term solution and then replace it when our assets grow."

–Zaid Al-Qaimi
Chief Investment Officer
Kimera

This CEO of a Kuwaiti single-family office has a legacy to maintain

By Siobhan Wagner

Mohammad Al Duaij drives a 13-year-old Range Rover, which seems kind of odd for someone who's from a well-known wealthy family in Kuwait. "My friends make fun of me and say, 'Oh, you're from a rich family and the CEO of a company and you're still using an old car,'" he says. "It's not about showing off." Al Duaij runs Alea Global Group, a single-family office that invests the wealth his family accumulated through a string of businesses stretching back to the 17th century.

The Al Duaij family started Alea in 1998, managing a portfolio that was focused mostly on real estate in Kuwait and Saudi Arabia and private equity in the Persian Gulf region and Europe. Al Duaij, 37, took over in 2008 and expanded the company's reach into Latin America and Asia. Its investments include everything from agricultural land in Brazil to a commodity trading arm in Asia.

A lot of what Alea does is under the radar. "We're very low-profile," Al Duaij says. "Even the company name that we're running, the family office, that's not my family name. But I am proud of it, don't get me wrong." Al Duaij, who worked at an economic development fund in Kuwait and later an investment bank there before joining Alea, says one of the biggest differences in making business decisions now is the emotions attached to them.

"With a family business, the emotional part comes into every decision that you are taking because the family is behind it," he says. Al Duaij says the pressure of being from a successful family also makes him more cautious, so he avoids potentially fleeting investment trends such as Bitcoin.

"My family gives me the privilege of the legacy of having a brand name. I don't want to ruin it for stupid stuff," he says. "It's not about the money. The money goes and comes. Our brand name is the real money for us." Many of the wealthiest families in the petroleum-rich Gulf region, who are among Alea's clients as part of its advisory business, have built up their fortunes through real estate and trading, not oil, as many assume, he says. Oil reserves, he explains, are generally owned by the government.

Another Western misperception about Gulf Arabs, Al Duaij says, is that the rich "have plenty of money and no knowledge." He says anyone who has a business meeting with these families soon finds they're sophisticated investors who "need a lot of time to get convinced." How much time? Al Duaij says the New York-style 15-minute power meeting doesn't cut it: "You have to plan a onehour meeting – first to chitchat, to talk about football, politics, the economy, and then have coffee. Then you start talking about your story." Don't just throw out numbers, because "that's a turnoff," he says. "If you give me a story about how we create this deal, that would motivate me to hear more about you."

Wagner is special reports editor for Bloomberg Markets in New York.


63.25
69.81

Transition in energy, transport – 10 predictions for 2019

By BloombergNEF

No one loves the messenger who brings bad news, said the playwright Sophocles nearly 2,500 years ago. What a relief, therefore, that in this year's 10 Predictions, BNEF is bringing you a positive message on the world's likely progress in 2019 toward what we call a "cleaner future".

We expect the low-carbon transition to advance steadily this year, fueled by remorseless reductions in the costs of solar and wind electricity and of lithium-ion batteries – and also by a widening realization on the part of investors and corporations that there is this "sustainability thing" and, for reasons of self-interest, they just need to do it.

If "steadily" sounds dull, then it is unlikely to be – because 2019, at least viewed from mid-January, has all the hallmarks of being a turbulent year in the wider world of economics and politics. Against that backdrop, steady means resilient, a safe haven.

To mention a few of the dark clouds on the 2019 horizon, we have the recent, near-20% plunge in the S&P 500 Index in the three months to December 26, in the face of slowing global GDP growth. OK, the financial markets are famous for anticipating more recessions than we actually get, but it is at least a warning sign. There are other dark clouds too: from a viewpoint in mid-January, it's hard not to feel queasy about the risk of a political crisis in the U.S., as the Democrat-led House investigates President Donald Trump, or one in Europe triggered by Italian economic policy or by a disorderly Brexit. Oh, and there are the economic strains increasingly visible in debt-soaked China.

Economic and political troubles during 2019 might influence the flow of investment in the "cleaner future", but they will not halt it. In fact, I expect this year to see more innovation than ever before on challenges such as how to balance a wind/solar-heavy electricity system, how to make zero-subsidy renewables investable, and how to decarbonize heat.

Below, I set out BNEF's 10 Predictions for 2019, encompassing clean energy generally, solar and wind, battery storage, electric vehicles, U.S. natural gas, international LNG, oil markets, digitalization, and energy in China – all hot from the keyboards of my colleagues who run those respective analyst teams.

Another of Sophocles' nostrums was: "A short saying often contains much wisdom." Unfortunately, I can't promise to live up to that in this article, certainly not the brevity. But please bear with me.

1. Lower costs, lower dollar investment

Each year, clean energy investment has to run faster just to stand still. With wind and, particularly, solar costs falling all the time, the world has to order more and more capacity just to match the previous period's dollar investment total. It often manages it: for instance, capacity added rose sharply in 2017, and dollars committed also increased. However, only the first of these (capacity) increased in 2018. I expect that to be the case again in 2019.

We should get more gigawatts of both wind and solar installed this year than last (see predictions 2 and 3), but solar capital costs fell particularly sharply in 2018 – by some 12% – as manufacturers slashed module prices in the face of a glut. Also, 2018 was a stellar year for high-ticket offshore wind, with $25.7 billion invested thanks to five European projects in the $1-3.5 billion-dollar range and no fewer than 13 arrays in Chinese waters. It will be a struggle to surpass that total in 2019, despite the bullish medium-term outlook (see prediction 3). More likely, 2019 will fall modestly short. In addition, the shaky stock market might mean public markets investment in clean energy undershoots 2018's $10.5 billion.

So I expect a respectable 2019 for clean energy investment, close to reaching $300 billion for the sixth successive year, but not matching last year's $332.1 billion. (See our press release, published today.)

– Angus McCrone, BloombergNEF

2. Solar additions rise despite China

BNEF reckons that solar installations in 2018 will end up at about 109GW, once the final numbers come in during the next few weeks. The year ahead is likely to see growth to the 125GW to 141GW range. Europe is building more PV once again, and India, the Middle East, North Africa and Turkey are continuing to expand their deployments.

The world's largest PV market, China, is in disarray as the government tries to reconcile future solar support with a deficit in the renewable energy fund of 150 billion yuan ($23.4 billion) at the end of 2017. Clients can read more on these links (web | terminal). Meanwhile, new countries are holding auctions and tenders all the time to buy cost-effective solar power, although governments hoping to set new records may be disappointed in 2019. Incremental improvements in cost and performance will continue, but the big price fall of last year, on the back of the sudden Chinese slowdown, will not be repeated. Some firms may exit the market as module manufacturing becomes even more competitive. Technologies in the news will include floating solar, bifacial modules and combining utility-scale storage with solar.

– Jenny Chase, Head of Solar, BloombergNEF

3. More consolidation in onshore wind

The wind market is set to see a leap in new capacity added, from about 53.5GW in 2018 to more than 70GW in 2019, with Northern Europe, China and the U.S. all boosting the onshore element, many of those projects already financed in 2018. The offshore additions are likely to rise from 4.8GW to 8.5GW.

In offshore wind, Europe is set to install 4.9GW in 2019, compared to 3.5GW in Asia, both record figures. This will be the last year before Asia takes over as the leading market, on our forecasts installing 25% more capacity than Europe during the 2020s. Offshore wind is the 'must-have' technology of 2019, spurred by eye-catching price drops and awe-inspiring scale.

In onshore wind, turbine prices have dropped steeply. Since December 2016, they are down 17% according to the 2018 BNEF Wind Turbine Price Index (web | terminal). We forecast a temporary stabilization at just below $0.8 million per MW in 2019. Despite this, the year will be a moment of truth for onshore wind turbine makers and their suppliers. To fill order books in the last two years, industry players have made aggressive bets on the cost savings and efficiency gains they could achieve. These bets are now being called on. This is likely to lead to further cuts and consolidation, especially in China and India

– David Hostert, Head of Wind, BloombergNEF

4. Energy storage adds 10GWh for first time

Annual global energy storage deployments in 2019 will exceed 10GWh for the first time in the history of the market. This includes both utility-scale and behind-the-meter assets, and will be up from last year's estimated 8GWh (or 4GW) of new installations.

Chinese battery producers will establish a truly global presence, despite the threat of trade wars. Automotive companies will expand relationships with Chinese suppliers as they ramp up sales in that country. International energy storage developers and integrators will head to China in search of batteries, as the Korean domestic market keeps its champions busy. Fierce competition and the recent easing of cobalt and lithium costs will push average prices below $150/kWh, undershooting the experience curve, while EV-only battery prices will be even lower than that. At the end of 2018, battery pack prices reached a record low at $176 per kWh.

– Logan Goldie-Scot, Head of Energy Storage, BloombergNEF

5. Electric vehicle sales up by "only" 40%

There are now almost 5 million passenger electric vehicles on the road globally (over 5 million including buses and other commercial vehicles). We expect another 2.6 million to be sold in 2019. This will represent around a 40% growth rate, down from the 70% growth rate in 2018. China will again lead, with some 1.5 million of those sales, representing around 57% of the global market.

China's market is in transition, and the recent annual doubling of sales every year looks unlikely to hold in 2019. We expect subsidies to be cut in February, but with a phase-out period that lasts until the end of 2Q. The 'New Energy Vehicle' quota takes effect this year but the requirements for 2019 are relatively modest. Broader macroeconomic factors (higher interest rates and slowing consumer spending) will also impact global sales. In markets like the U.S. and the U.K., direct purchase subsidies are already starting to wind down.

We expect European EV sales to come in just under 500,000. Growth should be strong in the Nordics and Germany. Sales in Italy have been slow but should start picking up in 2019, while sales in the U.K. will likely be flat or declining after the government eliminated support for popular plug-in hybrid models. North America sales should come in around 425,000, up modestly from 405,000. The Tesla Model 3 surge boosted 2H 2018 sales but the momentum will be difficult to maintain unless a lower-cost model can be introduced quickly. Sales in Japan and South Korea combined should be around 100,000.

– Colin McKerracher, Head of Advanced Transport, BloombergNEF

6. New infrastructure to boost U.S. gas exports

BNEF expects the U.S. natural gas Henry Hub price benchmark to average between $2.50 and $3.50 per million British Thermal Units (MMBtu) in 2019, depending on how weather compares to normal. Once again, rising demand in the South is expected to be met by stronger production in the Northeast.

2018 was a year of unlocking more natural gas volumes from the Appalachian basin bound to the Midwest. The upstream impact was higher prices for the basin, which will support further production growth in 2019. The downstream impact was cheaper prices in the Midwest and a stronger competitive advantage for natural gas in that historically coal-heavy electricity-producing region. This penetration of natural gas in the Midwest will continue in 2019.

In the South, West Texas Permian production will remain constrained as new midstream capacity to take gas to the Gulf Coast will likely not come online until 2020. Weak gas prices should therefore prevail in West Texas for 2019. However, I expect exports from the Gulf to benefit from three new additions: 1) a second liquefaction train at the Corpus Christi LNG terminal, 2) the commissioning of three other new LNG export facilities, and 3) the completion of a 2.6 Bcfd underwater pipeline to export gas to Mexico.

– Laurent Key, Head of North America Gas, BloombergNEF

7. LNG to grow strongly for third year

Global LNG demand leapt 10% in 2018 to reach 313 million metric tons per annum – despite higher LNG prices (averaged at $10/MMBtu) than 2017 (averaged at $7/MMBtu). In 2019, we expect the global LNG trade to expand by a further 8% to reach 340MMtpa.

China will remain the key driver thanks to its policy to cut pollution from burning coal. South and Southeast Asia will continue to see their LNG imports rise on the back of higher power gas demand, infrastructure expansion and falling indigenous gas production. With its nuclear restart proceeding more slowly than expected, Japan will be taking contracted volumes from its newly commissioned LNG supply projects in Australia. Europe will further increase its imports, especially as it currently looks to be a more profitable destination than Asia for U.S. supply. In 2018, Europe imported 6MMt more LNG to reach a total of 50MMtpa, the highest since 2011.

Demand is being supported by the relative price level of LNG (largely influenced by oil and Henry Hub prices) compared to coal prices. The persistently high range of coal futures prices ($90-100/t) due to tight supply makes LNG imports an attractive option. The additional 30MMt of new LNG supply capacity scheduled to come online in 2019 will be more than sufficient to support anticipated demand growth and keep LNG prices in check in the spot market.

– Maggie Kuang, Head of Global LNG, BloombergNEF

8. Firmer oil price on Iran, fed, shipping

Crude oil had a rocky 2018. Both Brent and WTI rose gradually during the first nine months of the year but gave up all of their gains in the fourth quarter, ending the year down by 19% and 26% respectively. The volatility was driven by increasing U.S. production, flip-flopping around U.S. sanctions on Iran, and uncertainty around OPEC's response to falling prices. These factors are being compounded by growing macroeconomic risks.

These drivers of oil price volatility will continue into 2019, but we expect crude to end the year in positive territory as renewed resolve from OPEC coincides with the expiration of waivers for U.S. sanctions on Iranian oil exports. If a more dovish stance from the Federal Reserve causes the dollar to give back some of its 2018 gains, and the risks hanging over emerging markets from U.S.-China trade tensions recede, we expect oil prices to recover further.

An additional upside risk for crude is the looming commencement of the International Maritime Organization's global sulfur content limit from January 1 next year. This is likely to increase demand for middle distillates, which will require increased refinery runs and boost demand for Brent-like crude.

– Richard Chatterton, Head of Oil Demand Analysis, BloombergNEF

9. Industrials splash out on IoT

Industrial equipment manufacturers have recently spent billions of dollars on Internet of Things, artificial intelligence, asset automation, robotics and sensors. This has helped them get a small portion of their revenue from selling digital software to existing customers. However, the ambition of companies like GE, Siemens, Hitachi, ABB and Schneider was much larger than this, and has been dampened in part due to strong competition from software startups, and big tech giants.

Industrials do not often have the best or cheapest IoT software products, and buying software from equipment manufacturers is not an ideal fit for customers. In 2018, Schneider and GE both spun out their digital technology IP into separate companies – Schneider put its asset software into Aveva (of which it now owns 60%), and GE announced in December the creation of a yet-to-be-named independent entity. Schneider sought to create a nimbler software firm that could sell to non-Schneider clients. GE might achieve the same, but its nearer-term aim was more defensive – to trim the industrial parent's broad focus.

BNEF expects that in 2019 other large industrials will invest heavily in their digital platforms, through acquisitions, mergers and venture investing. Most will probably double down on digital transformation, rather than spinning out software businesses. In December last year, ABB sold its grid business to Hitachi in order to focus more on software, automation and robotics. We expect other significant IoT investment from Siemens, Toshiba, Hitachi, Honeywell and Rockwell Automation, with a focus on mergers and acquisitions.

– Claire Curry, Head of Digital Industry Research, BloombergNEF

10. Steps forward on China's long energy transition

Although China will remain the world's largest deployer of new renewable energy capacity, the 40GW of solar and 20GW of wind that we expect this year will not shatter any previous records. Instead, watch for the subtle but far more meaningful changes that will reshape the world's largest power system.

The government's main dilemma is how to ensure the country's wind and solar industries continue to thrive on strong domestic demand without costly feed-in tariffs to support them. The goal is to push renewable energy toward wholesale grid parity (which in China is defined as parity with each province's mostly coal power projects) so that it no longer relies on subsidies.

The most significant new effort toward this is peak shifting, which is to encourage thermal power plants to lower their output to allow more renewable energy dispatch. In other words, coal power plants now need to make way for wind and solar. The government wants to implement this nationwide in 2019.

Other measures to ensure greater renewable dispatch are more familiar, including building more projects closer to demand centers (such as rooftop solar or distributed wind), making more flexible power sources available (such as hydro, retrofitted coal peaking plants, or energy storage), new transmission lines, and enforcing the renewable portfolio standard.

China is becoming like any other power market where the key challenge toward renewable energy is not how to build more of it, but rather how to integrate what's already there into a clean, reliable and cheap system.

– Nannan Kou, Head of China, BloombergNEF

Trillion-dollar inheritance

Walmart, Samsung, Koch Industries & Hermès have built some of the biggest fortunes to ever be handed down.

Powered by Bloomberg Wealth

The saying, or at least the sentiment, sounds familiar in any language: "Shirtsleeves to shirtsleeves in three generations."

The adage is often attributed to Andrew Carnegie, but the notion that family wealth ends up squandered travels far. "Stable to stars to stable," an Italian version goes. "From paddy to paddy in three generations," runs the Chinese saying.

But in an era of mind-boggling wealth and gaping inequality, there seems little danger of that happening anytime soon to the world's 25 richest clans, who as of June 15 controlled $1.1 trillion of wealth, according to data compiled by the Bloomberg Billionaires Index.

From Mars bars to Hermès scarves, supermarkets to hotels, and data firms to drugmakers, the source of this wealth is varied, but its scale is startling: more than the market cap of Apple Inc., all the deposits held by Citigroup Inc., or the entire gross domestic product of Indonesia.

And any calculation is likely to be a lowball figure. The wealth of families such as the Rothschilds or Rockefellers is too diffuse to value. The nature of many dynastic fortunes — backed sometimes by decades or centuries of assets and dividends — can obfuscate their true size. Clans whose source of wealth is unverifiable or derives primarily from the state, such as the sprawling House of Saud, are absent from our list as well.

Bloomberg's categorization of family wealth also excludes first generation fortunes and those in the hands of a single heir. That means just three Asian families make the list and none from China, reflecting the relatively recent wealth boom experienced by the region. That should soon change. Family offices are proliferating in the region, and tycoons such as Li Ka-shing are starting to hand over their empires to their sons and daughters.

The dwindling of once-storied fortunes like those of the Pulitzers, Vanderbilts, and Woolworths illustrates how common it is for even the biggest fortunes to be squandered. "There are a host of hurdles families must tackle to ensure that their wealth is safeguarded through the generations," said Rebecca Gooch of Campden Wealth Ltd. "Strategic planning, education and communication is key."

Some billionaires are taking a different tack. Bill Gates and Mark Zuckerberg are among the entrepreneurs who have signed up for Warren Buffett's Giving Pledge and committed to dedicating the majority of their wealth to philanthropy.

This approach embodies another Carnegie dictum: "To spend the first third of one's life getting all the education one can. To spend the next third making all the money one can. To spend the last third giving it all away to worthwhile causes."

Walmart

Company: Walmart Inc.

Wealth: $151.5B*

Industry: Consumer Retail

Base: Bentonville, Arkansas

Walmart is the world's largest retailer by revenue, with annual sales of $500 billion from almost 12,000 stores worldwide. Holding companies Walton Enterprises LLC and the Walton Family Holdings Trust own half the retailer, a stake that's the foundation of the world's biggest family fortune.

Koch

Company: Koch Industries Inc.

Wealth: $98.7B

Industry: Industrial

Base: Wichita, Kansas

Brothers Frederick, Charles, David, and William inherited father Fred's oil refinery business. A feud over control of the company in the early 1980s led Frederick and William to leave the family business; Charles and David stayed and have since transformed it into Koch Industries, a conglomerate with annual revenue of about $100 billion. David and Charles manage a portion of their wealth through a family office, 1888 Management LLC.

Mars

Company: Mars Inc.

Wealth: $89.7B

Industry: Confectionery, Pet Care

Base: McLean, Virginia

Frank Mars learned to hand-dip chocolates as a schoolboy. The business he went on to found is best known for M&M's and Milky Way and Mars bars, though pet-care products make up almost half the company's more than $35 billion in annual revenue. The closely held business is entirely owned by members of the Mars family.

Anheuser-Busch

Company: Anheuser-Busch InBev SA/NV

Wealth: $54.1B

Industry: Beverages

Base: Belgium

The collective enterprise of these three Belgian beermaking families has roots in the 14th century. The Van Damme family joined the others when the 1987 merger of Piedboeuf and Artois led to the creation of Interbrew, which merged with Brazil's AmBev in 2004. The company then combined with Anheuser-Busch in 2008. Verlinvest SA, an investment vehicle, manages more than $2 billion in family assets.

Hermès

Company: Hermès International SA

Wealth: $49.2B

Industry: Luxury Goods

Base: Paris, France

Jean-Louis Dumas, who died in 2010, is credited with turning Hermès into a global giant in luxury fashion. Among the family members who maintain senior positions at the company are Pierre-Alexis Dumas, the artistic director, and Axel Dumas, the chairman.

Chanel

Company: Chanel SA

Wealth: $45.6B

Industry: Luxury Goods

Base: Paris, France

Brothers Alain and Gérard Wertheimer are reaping the benefits of their grandfather's funding of designer Coco Chanel in 1920s Paris. The siblings own the closely held fashion house, which introduced the "little black dress" to the world. It had revenue of $9.6 billion in 2017. The Wertheimers also own racehorses and vineyards.

Reliance Industries

Company: Reliance Industries Ltd.

Wealth: $43.4B

Industry: Industrial

Base: Mumbai, India

Dhirubhai Ambani, the father of Mukesh and Anil, started building the precursor to Reliance Industries in 1957. When Dhirubhai died in 2002 without leaving a will, his widow brokered a settlement between her sons over control of the fortune. Mukesh is now at the helm of the conglomerate, which owns the world's largest oil refining complex. He lives in a 27-story mansion that's been called the world's most expensive private residence.

BMW

Company: Bayerische Motoren Werke AG

Wealth: $42.7B

Industry: Automotive

Base: Munich, Germany

Herbert Quandt helped turn BMW from a struggling carmaker into one of the world's largest makers of luxury vehicles. Family matriarch Johanna Quandt died in 2015; her children, Stefan Quandt and Susanne Klatten, retain control of the company. Their other investments include stakes in German logistics company Logwin AG and Dutch security software company Gemalto NV.

Cargill

Company: Cargill Inc.

Wealth: $42.3B

Industry: Industrial

Base: Minneapolis, Minnesota

Family members are majority owners of the largest closely held U.S. company. It was founded by W.W. Cargill, who started a commodities business with a single grain-storage warehouse in Conover, Iowa, in 1865. His descendants maintain control of the food, agriculture and industrial giant.

Boehringer Ingelheim

Company: Boehringer Ingelheim GmbH

Wealth: $42.2B

Industry: Pharmaceuticals

Base: Ingelheim, Germany

German drugmaker Boehringer Ingelheim was founded in 1885 by Albert Boehringer, and more than 130 years later the Boehringer family, which includes a line of von Baumbachs, are still in charge. Chairman Hubertus von Baumbach and his extended family are owners of the closely held company.

Aldi

Company: Aldi

Wealth: $38.8B

Industry: Consumer Retail

Base: Essen & Muelheim, Germany

Brothers Theo and Karl Albrecht took over their parents' grocery store after returning home from World War II and turned it into Aldi, a national chain of discount supermarkets. The brothers split the business in the 1960s after a dispute over the direction of the company. The two branches – Aldi Nord and Aldi Süd – now have more than 10,000 stores combined. Theo's side of the family also owns Trader Joe's, which they bought in 1979.

Auchan

Company: Auchan Holding SA

Wealth: $35.7B

Industry: Consumer Retail

Base: Lille, France

The Mulliez family had already built a retail empire by the time Gérard Mulliez started Auchan, known as France's Walmart, in 1961. Auchan has grown into one of Europe's biggest supermarket chains. The family holding company, Association Familiale Mulliez, controls a diverse group of retail businesses, including home-improvement chain Leroy Merlin and sports and leisure group Decathlon.

Sun Hung Kai Properties

Company: Sun Hung Kai Properties Ltd.

Wealth: $34B

Industry: Real Estate

Base: Hong Kong

Kwok Tak-seng listed Sun Hung Kai Properties in 1972. The company has since become one of Hong Kong's largest developers and the basis of the Kwok family fortune. His sons, Walter, Thomas, and Raymond, assumed control when he died in 1990.

Cox Enterprises

Company: Cox Enterprises Inc.

Wealth: $33.6B

Industry: Communications, Automotive

Base: Atlanta, Georgia

The Cox family controls Cox Enterprises, a conglomerate with about $20 billion in annual revenue. Its Cox Communications division is the third largest cable company in the U.S. James Cox founded the company in 1898. His descendants, including James Kennedy and Blair Parry-Okeden, remain shareholders in the group.

Hyatt

Company: Hyatt Hotels Corp.

Wealth: $33.5B

Industry: Hotels

Base: Chicago, Illinois

The son of a Ukrainian immigrant, A.N. Pritzker began investing in real estate and troubled companies while working for his father's law firm. The investments seeded the fortune of one of America's oldest dynasties, whose shared assets include Hyatt Hotels. The family are prominent supporters of the Democratic Party; Penny Pritzker served as U.S. secretary of commerce under President Barack Obama, and her younger brother J.B. is running for governor of Illinois.

Samsung

Company: Samsung Group

Wealth: $30.9B

Industry: Multiple

Base: Seoul, S. Korea

Chairman Lee Kun-hee's father, Lee Byung-chull, started Samsung as a trading company in 1938. The conglomerate is now known as the world's largest producer of smartphones. Lee Kun-hee's son, Jay Y. Lee, was released from jail in February following a reduction in a prison sentence related to bribery charges.

Tetra Laval

Company: Tetra Laval Group

Wealth: $30.9B

Industry: Packaging

Base: London, England

The family's wealth originated with Tetra Pak, the long-life drinks carton pioneered by Ruben Rausing in Sweden in the 1950s. Descendants of Ruben's son Gad now control all of closely held Tetra Laval, one of the world's biggest packaging companies. Another son of Ruben's, Hans, sold his stake in the business to Gad in 1995 and has since invested in ecofriendly packaging and equities through London-based Alta Advisers Ltd.

Thomson Reuters

Company: Thomson Reuters Corp.

Wealth: $30.9B

Industry: Media

Base: Ontario, Canada

The wealth of Canada's richest family originated in the early 1930s when Roy Thomson opened an Ontario radio station. Within five years, he'd become the country's leading newspaper owner. The family now shares a 64 percent stake in financial data and services provider Thomson Reuters, which they hold through investment firm Woodbridge Co.

SC Johnson

Company: S.C. Johnson & Son Inc.

Wealth: $28.2B

Industry: Household Goods

Base: Racine, Wisconsin

Samuel Johnson began selling parquet flooring in 1882. Five generations of the family have since built S.C. Johnson into a major household goods maker. H. Fisk Johnson is the company's chairman and chief executive officer. Its brands include Mr. Muscle, Raid and Windex.

Dassault Group

Company: Dassault Group

Wealth: $27.8B

Industry: Diversified

Base: Paris, France

The Dassault Group empire includes military aircraft manufacturers, newspapers, and real estate and software businesses. Founder Marcel Bloch, a Jewish aviation legend, was captured by Nazis in World War II and later changed his name to Dassault, an homage to his brother's wartime pseudonym, which means "assault tank." His son Serge Dassault, who took the helm of the company in 1986, died in May.

Enterprise Products

Company: Enterprise Products Partners LP

Wealth: $26B

Industry: Natural Gas & Crude Oil

Base: Houston, Texas

Pipeline behemoth Enterprise Products Partners was started by Dan Duncan in 1968. Duncan lost his mother to tuberculosis, his brother to blood poisoning, and his father to leukemia before the age of 18. He died in 2010. The gas and oil company is still under family control.

Roche

Company: Roche Holding AG

Wealth: $34B

Industry: Pharmaceuticals

Base: Basel, Switzerland

Drugmaker Roche was founded by entrepreneur Fritz Hoffmann-La Roche in 1896. His descendants now control a 9 percent stake in the company, whose blockbuster oncology drugs helped it generate $54.1 billion in revenue in 2017. Family members have been prominent supporters of nature conservation. Fourth-generation scion André Hoffmann founded and chairs multifamily office Massellaz SA.

Hearst

Company: Hearst Corp.

Wealth: $24.5B

Industry: Media, Business Information

Base: New York

William Randolph Hearst laid the foundation for his family's fortune when he took control of the *San Francisco Examiner* from his father in 1887. William's grandson William Randolph Hearst III is chairman of the company these days. Its stable of media assets includes stakes in television networks A&E and ESPN. Hearst is perhaps best known as a media company but also owns Fitch Ratings, the credit evaluating company.

Estée Lauder

Company: Estée Lauder COS.

Wealth: $24.3B

Industry: Cosmetics

Base: New York

Queens, N.Y., native Estée Lauder founded a business selling skin-care products in 1946 with her husband, Joseph. Today her eponymous company sells $12 billion in cosmetics and fragrances annually. Leonard Lauder, a notable art collector and company chairman emeritus, has donated hundreds of his pieces, from vintage postcards to Picassos, to museums.

Ferrero

Company: Ferrero SpA

Wealth: $22.9B

Industry: Confectionery

Base: Alba, Italy

Michele Ferrero built a global chocolate confectionery company from the small Italian town of Alba. His son Giovanni took sole helm of the family business after another son, Pietro, died in a cycling accident in 2011. Ferrero acquired Nestlé SA's U.S. candy business for $2.8 billion in 2018.

Edited by Shelly Hagan, Andrew Heathcote, Tom Metcalf, Devon Pendleton, Olivia Carville, Yoojung Lee.

*See "Welcome to Waltonville" (p. 8).
The Walton's fortune has since risen – it was $167 billion as of August 23.

Saudi Arabia insight

Public spending is the only game in town

By Ziad Daoud

Lower oil prices presents Saudi Arabia with a dilemma. The government could either cut public spending or absorb the shock on its balance sheet by running a larger deficit. Political considerations suggest it would opt for the latter, sustaining non-oil growth at 2.6% in 2019.

Growth to stabilize

The government slashed public spending after oil prices fell in 2014, leading to a slowdown in non-oil growth. As oil prices began to pick up again, the government loosened the purse strings, helping the economy to recover somewhat.

Higher public spending should continue into 2019 – the government has recently revised up its spending plans for next year by 100 billion riyal (about 3.4% of GDP). It also announced the reinstatement of annual pay rises for public-sector workers. On a recent tour of the country, King Salman unveiled projects worth billions of dollars in far-flung areas of the kingdom.

Higher public spending will drive non-oil growth to 2.6% in 2019. This is higher than the 2016-17 lows but lower than levels achieved before 2014 – with oil prices below $100, government spending remains constrained by budgetary limits.

Investment outlook not rosy

Can the private sector fill some of the growth gap? Not really: consumers have been battered by the introduction of a value-added tax, reduced fuel subsidies, higher utility bills and expatriate levies.

Domestic private investors have been rattled by the detention of hundreds of businessmen, royals and officials in what the government called an anti-corruption campaign in November 2017.

Foreign investors, who have been slow anyway to commit to Saudi Arabia, are now facing increasing risks:

- There's a possibility that their local partners could get caught up in another anti-corruption campaign.
- They could be frozen out of the kingdom, as was recently the case with companies from Germany and Canada. The dispute with Germany took almost a year to resolve.
- They could also face a popular backlash after the murder of journalist Jamal Khashoggi in Istanbul in October.

Shunned by outside investors, the Saudi government is likely to double down on domestic support, by increasing public spending. Politics is likely to prove more powerful than the recent decline in oil prices.

Weaker balance sheet

But that's a dangerous path to take. The balance sheet of Saudi Arabia is weaker today that in 2014: the kingdom has withdrawn nearly a third of its vast foreign-currency reserves and accumulated a significant amount of foreign debt. If current spending patterns continue and the drop in oil prices persists, the currency peg could be under threat.

Vision 2030, a project promoted by the crown prince, was aiming to break the link between oil revenues, which finance public spending which in turn drives economic growth. Yet the events of the last year made breaking that link harder and Vision 2030 is slipping further out of sight. The Saudi economy will be growing on the same old engine in 2019: public spending fueled by oil.

Ziad Daoud is Chief Middle East Economist for Bloomberg Economics in Dubai. He has previously served as Head of Economics at QNB Group and as an economist at Fulcrum Asset Management.

Egypt insight

Lifting subsidies to barely shift inflation dial

By Ziad Daoud

Egypt is expected to remove its fuel subsidies this year. We estimate this will result in inflation accelerating by less than two percentage points, which is unlikely to prompt a reaction from the central bank.

- The inflationary impact from the complete removal of fuel subsidies should be around 1.5-2.0 ppts, depending on international oil prices.
- The central bank has room to keep rates on hold while maintaining a positive real rate: the policy rate is currently 475 basis points above inflation.

Egypt subsidy cuts: A recent history

Egypt has implemented four rounds of fuel subsidy cuts since July 2014. The country is expected to lift all fuel subsidies (excluding LPG) by end-June 2019, after which fuel prices will be linked to international oil prices and movements in the exchange rate.

In January, the government announced a plan to index the price of Octane 95 gasoline – the highest grade of fuel – to Brent crude costs, starting in April. The price will be reviewed on a quarterly basis and allowed to move by a maximum of 10% from one quarter to the next.

Some inflation, but not too much

We estimate the removal of subsidies will result in inflation accelerating by 1.5-2.0 ppts, depending on where Brent crude ends up in its $55-$80 per barrel price range.

- The cost recovery rate (the price of fuel relative to the cost of production) was 73% last July when oil prices were around $75 per barrel, according to the IMF.
- We estimate the current cost recovery rate to be 75%. Brent has fallen to around $62 per barrel, but Egypt produces nearly 80% of its oil consumption domestically, which means the improvement in the cost recovery rate isn't as dramatic as the decline in global oil prices.
- Completely removing subsidies means domestic fuel prices must increase by around a third. This is lower than what was experienced in previous rounds of subsidy cuts.
- Assuming a 5% pass-through from fuel prices to the consumer price index and Brent crude stabilizing at around $60 per barrel results in inflation that should accelerate by 1.7 ppts. Inflation would rise by 1.6 ppts if Brent were to fall to $55, this jumps to 1.9 ppts if the crude price climbed to $80.

Central bank response? None

An acceleration of inflation by less than 2 ppts is unlikely to prompt the central bank to take any action. The main policy rate (the Deposit Rate) is currently at 16.75% -- 475 bps higher than the latest inflation reading. The real interest rate (policy rate minus inflation) will likely remain positive despite the inflationary impact of removing the subsidy.

More crucial for the central bank is potential moves in the exchange rate. The rate has been relatively stable since Egypt floated the pound in November 2016. But increased volatility in the exchange rate could have a more meaningful impact on inflation than subsidy cuts. It could also affect portfolio flows into Egypt, which have been vital in maintaining stability of the pound and for building-up the country's foreign exchange reserves.

Ziad Daoud is Chief Middle East Economist for Bloomberg Economics in Dubai. He has previously served as Head of Economics at QNB Group and as an economist at Fulcrum Asset Management.

Forecast tables

Saudi Arabia Forecasts

Indicator	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	2017	2018	2019	2020
GDP growth (YoY %)	1.6	3.0	3.2	3.2	2.9	1.6	1.7	1.3	1.3	-0.9	2.3	2.4	1.3
Oil	1.3	3.7	4.2	4.2	3.3	0.5	.05	0.4	0.5	-3.1	2.5	2.1	0.5
Non-oil	2.4	2.5	2.5	2.5	2.6	2.6	2.7	2.0	2.0	1.1	2.3	2.6	0.5
CPI inflation (YoY %)	2.3	2.2	3.7	-0.2	0.3	0.3	0.0	0.0	0.0	-0.8	2.8	0.1	0.0
Policy rates (Reverse Repo)	2.00	2.25	2.50	2.75	3.00	3.25	3.25	3.25	3.25	1.50	2.50	3.25	3.25
Policy rate (Repo)	2.50	2.75	3.00	3.25	3.50	3.75	3.75	3.75	3.75	2.00	3.00	3.75	3.75

Turkey Forecasts

Indicator	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	2017	2018	2019	2020
GDP growth (YoY %)	5.2	2.6	-0.6	-1.1	-1.0	1.5	4.1	3.5	3.0	7.4	3.6	0.8	2.8
CPI inflation (YoY %)	12.8	19.4	22.0	22.0	20.9	19.1	16.3	15.7	15.0	11.1	16.2	19.4	14.8
Policy rates (1-week repo rate)	11.05	18.8	24.00	24.00	23.50	21.50	18.50	18.50	17.5	8.00	24.00	18.50	16.50

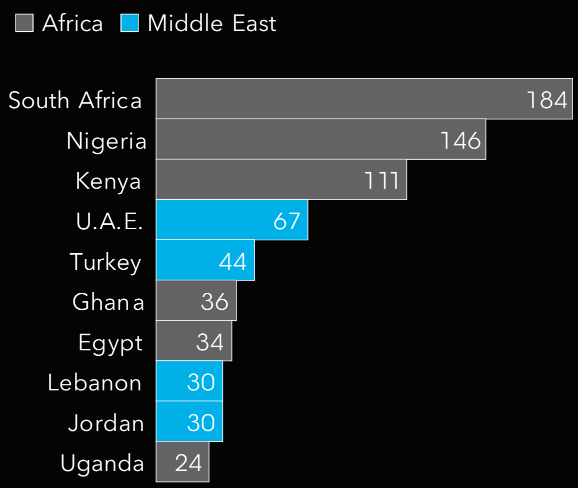
Fintech

The market for complex financial technology companies focused on Islamic finance, insurance, regulation, and blockchain-based solutions is just beginning to blossom in the Middle East and North Africa. Gulf countries, in particular, are likely to see strong growth trajectories in the sector this year thanks to government support. But for the region's fintech market to compete on an international level, it will need more venture capital investment. Over the next few pages, read details of the developments in the region's industry so far, and for more Bloomberg Intelligence research on banking in the MENA region, go to {BI BANKM <GO>}.

The U.A.E. Is gaining ground

The United Arab Emirates is becoming a fintech leader based on its number of startups, according to a report on the Middle East and Africa by consulting firm Accenture and Fintech Hive, a hub started in 2017 by the Dubai International Financial Centre (DIFC) to provide a link between fintech startups, financial industry companies, and regulators.

Number of fintech startups
2017



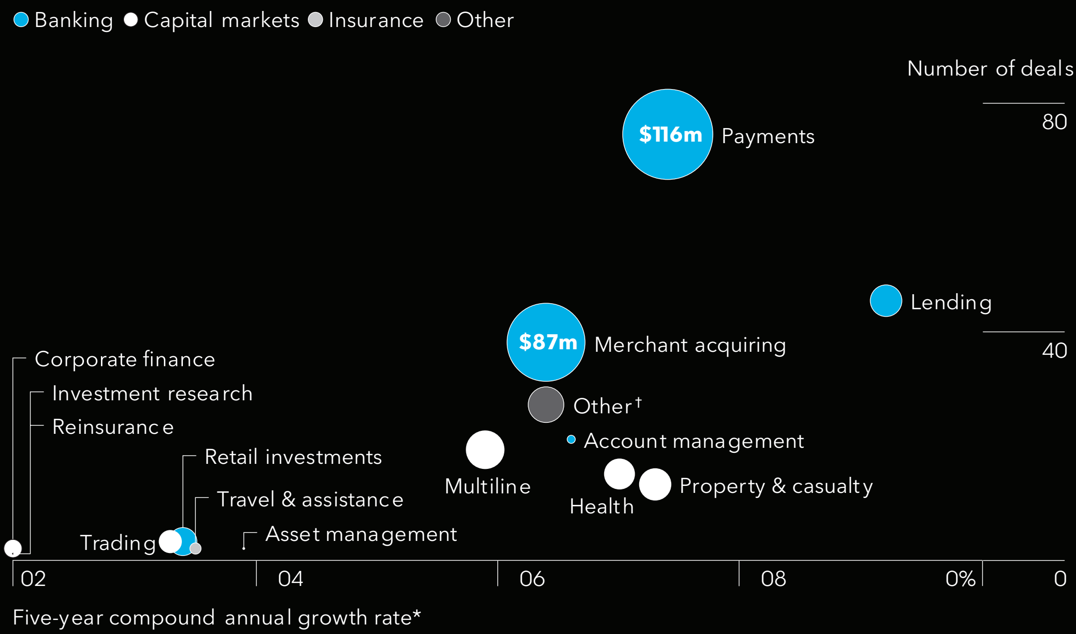
Source: Accenture analysis based on 10Eqs and CB Insights data

Untangling regulation

In addition to funding programs, governments in the Gulf region are creating regulatory frameworks to boost the fintech sector. Abu Dhabi's Financial Services Regulatory Authority set up a laboratory with a legislative framework in 2016 to cater specifically to the risks and requirements of fintech participants. The regulator Dubai Financial Services Authority in 2017 introduced an innovation-testing license, allowing fintech companies to develop concepts without being subject to full regulations.

Fintech financing activity by product segment

Circle size represents value of investments from 2010-17



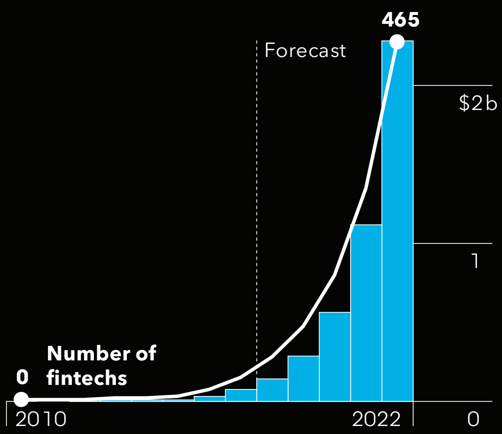
The life & annuities product segment has an investment value of zero and has been omitted. *Some categories calculated on fewer than five years. †Includes IT solutions and operations. Source: Accenture analysis based on CB Insights data

The first wave of fintech in the Middle East and North Africa region—which started after the 2008 crisis—centered on payments. The second wave, which promises to offer a better user experience than traditional banks, attracted the largest slice of funding in 2017, according to analysis from Wamda Research Lab. Now a third wave is emerging. Some banks in the region are adopting blockchain technology, and there are now startups in insurance, regulation, risk solutions, and identity verification.

Calling all venture capitalists

Still, the level of venture capital activity in Middle East fintech is relatively modest. Investment is expected to increase to $2 billion in 2022, from $78 million in 2017. Globally, more than $90 billion of venture capital was invested in fintech startups from 2010 to 2017, and only 1 percent was allocated to companies in the Middle East and Africa, according to the Accenture and Fintech Hive report. To boost development, Dubai's financial hub DIFC introduced a $100 million fund in 2017 to invest in early-stage startups and fintech companies.

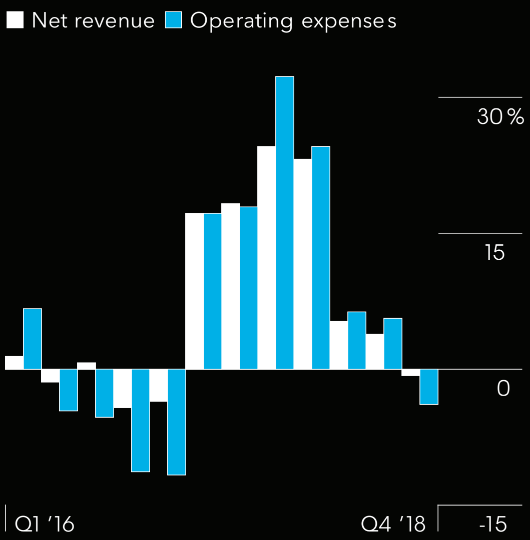
VC investment in Middle East fintech
Value of deals



Fintech adds price pressure to banks

Cost control is an important topic among U.A.E. banks, as they increasingly need to upgrade IT systems and reshape digital offerings. Fintech will pressure pricing on some retail services such as cross-border transfers and foreign exchange. Income from forex made up 4 percent of U.A.E. banks' 2017 net revenue, while net fees were 18 percent.

Revenue and costs of U.A.E. Banks
Year-over-year change



Building a blockchain city

Dubai has a vision to be the first city run on blockchain by 2020. The first pillar of its strategy aims to apply the technology to government services, with wide implementation expected this year. The second phase targets businesses in the private sector, including banks, insurers, and real estate. Smart Dubai, the government office facilitating the city's technical transformation, estimates blockchain adoption may unlock 5.5 billion dirham ($1.49 billion) in annual savings from document processing.

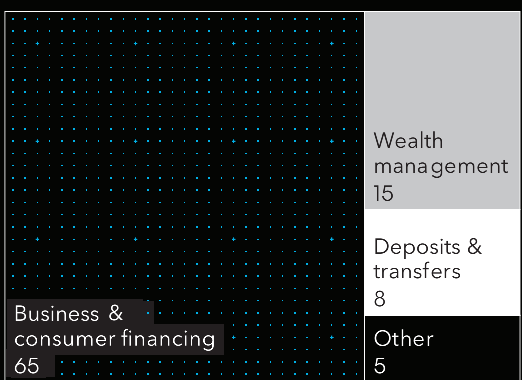
Banking on the future

In Bloomberg Intelligence's view, Islamic fintech has the best chance of taking off with a greater focus on blockchain smart contracts. This technology provides better product standardization and efficiency against conventional peers. Al Hilal Bank was the first Islamic bank to use blockchainbased technology for the resale and settlement of Sukuk bonds. Transforming the Sukuk market into digital platforms would lead to lower costs for investors and better transparency and standardization compared with traditional trading methods.

Peer popularity

Indonesia, which is home to more Muslims than any other nation, has the largest number of startups focused on Islamic fintech, followed by the U.S., the U.A.E., and the U.K., according to a 2018 analysis by advisory company DinarStandard. There were 93 Shariahcompliant fintech startups globally, of which 70 percent were focused on peer-to-peer solutions to facilitate consumer and business financing.

Islamic fintech startups
By core function*



Bahrain bets on crypto

Bahrain, whose economy is the smallest of the six members of the oil-rich Gulf Cooperation Council, is taking a lead in regulating crypto assets.

Formerly the Middle East's hub for financial industries, Bahrain is seeing cryptocurrency as a way to regain its footing as a banking center. In February, it took the first step in regulating crypto assets when its central bank issued "the final rules on a range of activities relevant" to them. The framework covers licensing, governance, cybersecurity, and other areas.

Most central banks around the world aren't yet convinced of the benefits of digital currencies, according to a recent Bank for International Settlements survey. Bahrain's attempt to attract companies focusing on blockchain technology and cryptocurrency trading comes as the sector remains largely unlicensed and unregulated in major global financial hubs. That's forcing adopters to seek clarity from smaller jurisdictions that have been more open to regulating the market such as Gibraltar, Liechtenstein, and Malta.

Before the announcement in February, the central bank in Bahrain was already operating an incubator-style sandbox licensing program, which included cryptocurrency exchange platforms and companies using blockchain, to allow startups to test out their services.

Nour Al Ali, Bloomberg News

Keeping up with the quants: One way family offices can compete.

By Jonathan Greenberg

Family offices like alternative investments, but they still love stocks. Equities accounted for 27.1 percent of the average family office portfolio in 2017, according to a research report by UBS Group AG and Campden Wealth Ltd. That represented the biggest allocation of all asset classes. Yet competing with the new, sophisticated, fundamental, and so-called quantamental investing techniques of large asset managers and hedge funds can pose some challenges for family offices.

During the technology revolution of the late 1990s, it appeared that anyone could manage money and make a fortune. It seemed easy then.

Everything you needed was available on the internet, and the market tended to go in only one direction: up. Day trading became popular as people quit their jobs to devote their time to buying and selling stocks online. Then, in 2000, the internet bubble burst. Maybe it wasn't so easy to manage your own money after all.

Meanwhile, many of the entrepreneurs who founded bubble-era technology companies came through the crash with lots of money still in their pockets – some had even become billionaires.

As they sought out dedicated personnel to manage their fortunes, the family office industry took off. There are now at least 10,000 single-family offices around the world, and more than half of them were set up in the past 15 years, according to Ernst & Young's 2016 Family Office Guide.

United States | Export | Settings | Factors to Watch

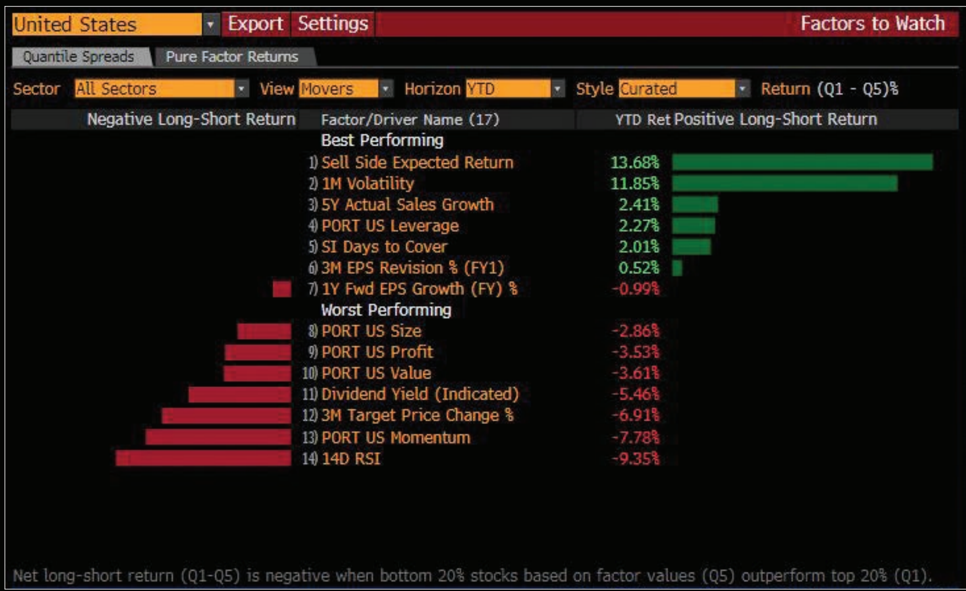
Quantile Spreads | Pure Factor Returns

Sector: All Sectors | View: Monitor | Return Net Long-Short (Q1-Q5)%

Style	Factor/Driver Name (17)	1D Ret ↓	1W Ret	Prior Month	YTD Ret	1Y Ret	7Y Ret	15Y Ret
Curated	<Filter>							
1) Momentum	PORT US Momentum	0.79%	1.92%	1.58%	-7.78%	-4.93%	27.83%	-10.20%
2) Revisions	3M Target Price Change %	0.54%	0.53%	2.01%	-6.91%	1.21%	19.51%	49.11%
3) Growth	5Y Actual Sales Growth	0.40%	1.98%	-0.94%	2.41%	5.06%	-5.82%	-5.20%
4) Growth	1Y Fwd EPS Growth (FY) %	0.26%	0.94%	-1.27%	-0.99%	-8.03%	16.53%	-4.42%
5) Technicals	14D RSI	0.14%	-2.72%	0.52%	-9.35%	-8.00%	-21.76%	-59.97%
6) Revisions	3M EPS Revision % (FY1)	0.05%	0.13%	-0.53%	0.52%	-0.23%	13.90%	37.79%
7) Surprises	EPS Surprise % (Last)	0.03%	0.74%	-0.42%	-1.99%	0.07%	5.69%	4.19%
8) Short Interest	SI Days to Cover	-0.04%	0.18%	-1.08%	2.01%	2.63%	-7.61%	-30.83%
9) Profitability	PORT US Profit	-0.06%	-1.64%	1.69%	-3.53%	-4.18%	-7.79%	17.92%
10) Share Buybacks	1Y Share Buyback	-0.17%	-1.49%	-1.04%	-2.41%	-2.88%	14.83%	31.94%
11) Dispersion	Sales Dispersion (FY1)	-0.23%	-2.62%	0.47%	-2.72%	-10.78%	-37.91%	-49.20%
12) Dividends	Dividend Yield (Indicated)	-0.24%	-1.07%	0.67%	-5.46%	0.84%	-10.99%	-22.18%
13) Size	PORT US Size	-0.28%	-1.95%	0.89%	-2.86%	-8.01%	-6.33%	1.39%
14) Leverage	PORT US Leverage	-0.32%	-1.05%	1.14%	2.27%	-3.28%	-1.44%	-7.57%
15) Volatility	1M Volatility	-0.32%	0.20%	-1.48%	11.85%	1.39%	-21.79%	-37.69%
16) Sentiment	Sell Side Expected Return	-0.42%	1.50%	-1.63%	13.68%	-6.21%	-5.65%	80.21%
17) Value	PORT US Value	-0.68%	-2.03%	-3.70%	-3.61%	-21.08%	-21.73%	44.61%

Net long-short return (Q1-Q5) is negative when bottom 20% stocks based on factor values (Q5) outperform top 20% (Q1).

Run **FTW <GO>** to see which factors have historically or are currently moving equity returns.



See the best- and worst-performing factors in a given universe or sector.

As family offices proliferated, the hedge fund industry flourished, bringing more-sophisticated approaches to alpha generation and risk management. From 2003 through 2007, the market rose. Then the money-market crisis hit, followed by the global financial crisis in 2008.

The wild market swings and wealth destruction made the case for robust diversification. Increasingly, large capital providers such as the Yale endowment invested in "uncorrelated" alternative asset classes including hedge funds and timber.

In addition, computing power became more robust and less expensive, and professionals across all industries talked about using machine learning and artificial intelligence to help them make better data-driven decisions.

Fundamental investing is thus transforming into quantamental investing, which combines fundamental and quantitative strategies to get the best performance. Many hedge funds and asset managers, whose strategies are based on fundamentals, are adding data scientists to their teams and seeking out and paying large sums of money for access to innovative data sources such as corporate "exhaust data" – credit card receipts and consumer geolocation information.

This has fueled the advent of an "alternative data" industry. These trends have created a competitive advantage for larger asset managers and hedge funds that can afford the associated costs, leaving some smaller asset managers, hedge funds, and family offices at a disadvantage.

Bloomberg is working to level the playing field for public-market investing in this increasingly quantamental world. To that end, some analyses that previously required teams of in-house quants to produce are now available on the terminal. One such function is the recently released Factors to Watch. Run FTW <GO>, and you can see which themes or factors are driving performance in equity markets.

FTW shows what that can mean for you. The function tracks the net return of a long-short portfolio based on exposure to a particular thematic factor. The math is simple. Starting with a selected universe such as U.S. equities or the constituents of the STOXX Europe 600 index, FTW buys the 20 percent of those stocks with the highest value of a particular factor and sells short the 20 percent with the lowest value. The return is the net difference between the long and short baskets. For shorter horizons such as one day or rolling week, FTW rebalances weekly. For longer horizons, it does so monthly.

Let's take a look, for example, at the story told by the Effective Tax Rate thematic factor, which is especially relevant given the change in tax policy in the U.S. last year. In FTW, type "effective tax rate" in the amber box under Name and hit enter. At the bottom of the screen, click on the up arrows to the left of Factor Performance: Effective Tax Rate (LTM).

The tax debate began in Congress in September 2017. That month, stocks of companies with the highest effective tax rates outperformed those with the lowest in anticipation of a potential tax cut, FTW shows. The debate entered a lull in October, as did those stocks, but heated up again in November. The legislation passed in December and took effect in January. The stocks with high values of the factor sold off in March as investors took profits before earnings season.

Stocks of companies with the highest effective tax rates outperformed those with the lowest in September 2017.

As of the end of June, FTW was sending multiple signals that the bull market may be intact, even though U.S. stocks had generated a total return of only 2.5 percent in the first half. To view year-to-date factor returns:

- First navigate back to the FTW home screen.
- Click the drop-down menu to the right of View and select Movers.
- Change the Horizon to Year-to-Date.

According to FTW, these were the three best-performing factors during the first half:

- **3M Target Price Change %**
  The 20 percent of stocks with the greatest increase in analysts' consensus target price for the trailing three months outperformed those in the lowest 20 percent by 5.8 percentage points. That suggested positive investor sentiment.
- **SI Days to Cover**
  Stocks with the highest short interest relative to their trading volume outperformed those with the lowest by 5.6 percentage points. That's also probably a bullish signal, suggesting hedge funds were covering their short positions.
- **PORT US Momentum**
  Momentum stocks, or those with the best trailing 52-week performance, topped those with the weakest performance in the first half by 3 percentage points. Yet momentum stocks lagged in June.

Here were the three worst-performing factors:

- **PORT US Value**
  Stocks with the cheapest multiples underperformed those with the highest by 13 percentage points. Performance may indicate the market prefers higher-valued, growth-oriented companies. That suggests we were still in midcycle.
- **PORT US Size**
  The largest companies underperformed the smallest by 11 percentage points, likely driven by fear of a trade war. Larger companies tend to have greater international exposure.
- **PORT US Profit**
  The most profitable companies underperformed the least, suggesting the market is willing to take risks More recently, value continued to be the biggest underperformer, down 12.37 percent in the year to August 17.

As markets move, FTW can help you piece together the narrative, informing your decisions about what types of stocks you should buy and sell.

Greenberg is Head of Equity Analysis & Quantamental Product at Bloomberg in New York.

By the numbers

Wealth is growing rapidly around the world, sometimes in surprising places. And affluent individuals, or those on track to be the millionaires of tomorrow, are the ones to watch.

$70t

Total global wealth of high-net-worth individuals, those with investable assets of $1 million or more, in 2017.

(Data: Capgemini World Wealth Report 2018)

$100t

Capgemini expects global high-net-worth individual wealth to reach 15 digits by 2025.

(Data: Capgemini World Wealth Report 2018)

665k

Asia-Pacific added about this many people to the global high-net-worth population in 2017.

(Data: Capgemini World Wealth Report 2018)

16.3%

The wealth of Ireland's high-net-worth individuals rose this much last year – the highest growth rate in Europe.

(Data: Capgemini World Wealth Report 2018)

72m

The number of people who qualify as affluent, with assets of $250,000 to $1 million, in 2017.

(Data: The Boston Consulting Group Global Wealth 2018 Report)

101m

The projected number of those defined as affluent in 2022.

(Data: The Boston Consulting Group Global Wealth 2018 Report)

$17.3t

The amount of global investable assets – equities, bonds, funds, currency & deposits – held by affluent individuals in 2017.

(Data: The Boston Consulting Group Global Wealth 2018 Report)

7.4%

Projected growth in global investable assets held by affluent individuals from 2017 to 2022.

(Data: The Boston Consulting Group Global Wealth 2018 Report)

Bloomberg Markets Special Report. Data compiled by Siobhan Wagner.

Rolls-Royce's Future Is Pricey Bespoking, Not Electric, Says CEO

Bespoke services mint the money.

By Hannah Elliott

More than 90 percent of all Rolls-Royce vehicles sold are so personalized they're practically one-offs.

With the Phantom estate car, that number reaches 99 percent. And with theCullinan SUV, it reaches absolute levels: Of the Cullinan SUVs sold, 100 percent have been customized.

That's according to Torsten Müller-Ötvös, the chief executive officer of Rolls-Royce Motor Cars Ltd. He spoke Wednesday as the Goodwood, England-based automaker released 2018 data showing record global sales.

The figures are notable because they show a big jump in the popularity and value of customizing already extremely expensive cars. (The average price of a Rolls-Royce sold in the U.S., its biggest market, is $400,000 including options.) In 2016, when 80 percent of Rolls-Royce vehicles worldwide were heavily customized, bespoke additions added 20 percent to the purchase price. For 2018 the added price is almost 40 percent.

To keep up with demand—and put its payroll where its payday is—Rolls-Royce hired 100 employees devoted to the bespoke department. That represents an almost 6 percent jump in total workforce to 1,900 and signifies where the company is focusing in 2019 and beyond. Rather than developing hybrid or electric technology to grab sales like other manufacturers (never hybrid, maybe electric in 10 years, Müller-Ötvös said in October), Rolls-Royce is doubling down on what is working now.

"It's needed," Müller-Ötvös says. "Customers are increasingly intrigued by all the possibilities we can offer—they want to put their own personal signature on the product. This is super important for us selling extraordinary objects of this caliber."

Rolls-Royce has increased options for bespoke cars such as the Phantom($450,000 base price), which can include a clear gallery-style box set inside the dashboard. Each one customized to showcase individual collections of object d'art such as pricey mechanical watches, rare stamps, or Fabergé eggs. You know, your standard stuff.

Wood inlays, leather varieties and colors, stitching and metal trims all comprise customization options.

The interior of a Rolls-Royce Phantom offers ample opportunities to personalize to exact tastes.

With the $325,000 Cullinan, new in 2018 with seating for up to seven, the SUV was designed with extra amenities that beg for customization: rear work stations trimmed in exotic wood, deep-pile cashmere carpeting, and spots for Champagne coolers, picnic baskets, and cigar humidors. The more space you have to work with, the more you can customize—and the more money you can make, the thinking goes. (For example: A picnic hamper costs $46,000; a 9-carat-gold-plated Spirit of Ecstasy hood ornament costs $17,000. Add in man-hours on more complicated extras, such as custom woodwork, and prices go up from there.)

While the Dawn was the brand's best-seller last year in the U.S., look for the V12 Cullinan to surpass it in 2019, says Müller-Ötvös, single-handedly accounting for more than 20 percent of sales.

"Cullinan will come into real play in 2019," he says. "We are already sitting on a very strong order bank," with most deliveries starting in the third quarter.

Cullinan is conquering buyers who might be tempted to buy Bentley's Bentayga($200,000) or Lamborghini's Urus ($200,000) instead. More than half of the people who have ordered a Cullinan are new to the brand. (Rolls-Royce's official stance is that it stands alone in this rarefied air: "Bentley is not a competitor," Müller-Ötvös says.)

Bentley Motors Ltd., for its part, has gained stature in some circles since Cullinan made its debut. Early reviews of the Bentayga were mixed, with critical jabs taken at its Audi-like body and soft drivetrain. But during a conversation at the Pebble Beach Concours d'Elegance, Bentley Chairman Adrian Hallmark said he felt "very good" about the Bentayga after seeing Cullinan's debut.

"We are in fantastic position," he said with a smile, referring to how the boxy and bigger Cullinan looked. The implication was that the new, more expensive offering from Rolls-Royce made Bentley's SUV, which had debuted first, look good.

Indeed, Instagram commenters and other critics had seemingly moved on from beating up Bentayga in favor of Cullinan, which in photos can look like a gilded Mack truck.

Big, expensive vehicles are easy targets, after all. They tend to photograph poorly and draw the most ire from environment- and class-minded critics who decry their conspicuous consumption (12 miles per gallon in the city, never mind the cash outlay). But they continue to be the primary money makers for Bentley, Rolls-Royce, Lamborghini, and every other automaker who makes a six-figure SUV, and even more so when they are bespoke.

Never mind the gas-thirsty drivetrain. It's very much besides the point.

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