

# Investor overview



At Texas Instruments, our focus is on building a better future as we design, manufacture and sell semiconductors. We have about 100,000 customers all over the world who use our “chips.”

Every day, our products help electronics designers unlock new possibilities that make the world safer, greener, healthier, smarter and more connected than ever before.

## **Our focus on analog and embedded processing, industrial and automotive**

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Our strategic focus remains on what we believe are the best products in the semiconductor industry, analog and embedded processing, and the best markets, industrial and automotive, both of which offer solid growth opportunities given their increasing semiconductor content.

### **Analog and embedded processing**

Analog and embedded processing products share characteristics that make them very attractive businesses:

- Both are pervasive technologies. Every electronics device uses some form of analog, and most use embedded processing.
- Both markets are large and highly fragmented, and while we enjoy strong positions in each, we have ample room to grow our share.
- Both are highly diversified, with tens of thousands of customers who use these technologies in a wide range of applications.
- Both can be produced with long-lived manufacturing technologies and equipment and, as a result, are less capital intensive than many other types of chips.
- Both have product life cycles that are measured in years, if not decades, enabling a stable base of revenue and solid returns on investment.

### **Industrial and automotive**

Turning to the end markets we serve, we see good opportunities in all of our markets, but we believe that industrial and automotive will be the primary growth drivers in our industry, and at TI, over the next decade.

This is because semiconductor content in industrial and automotive applications will significantly increase as companies use semiconductors to make their equipment smarter, safer, more connected and more efficient.

In automotive, the chip content continues to expand as cars have more electronic applications than ever before. We’re also seeing these applications become more pervasive as auto manufacturers deploy them throughout their fleets. For example, driver-assist and collision-avoidance systems, once limited to high-end cars, today are commonplace features. This trend toward higher semiconductor content will only expand as hybrid, electric and even autonomous vehicles become a growing percentage of the cars on the road.

We believe the growth opportunities are even greater in the industrial market, which is still in the early stages of semiconductor adoption. We see new, exciting examples of this market’s potential emerge every day in applications large and small. For example, smart thermostats, door locks and appliances can sense motion, humidity, temperature, and then transmit diagnostic information wirelessly to initiate a service call. More complex applications found in factories can range from smart motors that use less energy, to robotic assembly lines that use sensing technology to operate more autonomously and precisely, to sensors in tanks that gauge fluid levels and dispatch an automated alert when a refill is required.

In addition, the requirements for industrial applications map perfectly with the capabilities we have built over the years with our broad portfolio of power management, sensing, analog signal chain, embedded processing and connectivity products as well as the broad reach of our market channel, both of which allow us to serve and support this broad and diverse market with system solutions. This is in contrast to our more specialized peers, who approach the market in a product-centric manner.

We view our unique ability to serve the industrial and automotive markets and the intrinsic diversity they offer as strengths, as we aren’t tethered to the success of a single application or customer, or limited to only large, highly-visible opportunities. These markets also tend to be long-lasting, meaning product life cycles are measured in years and decades vs. an 18- to 24-month cycle typical with some personal electronics products. Once

you secure the business, it tends to last for a long time, which translates into a stronger, more stable growing business over time.

Bottom line, we expect analog and embedded processing products and the industrial and automotive markets to outperform the overall semiconductor market and to be our primary growth engines in the years ahead. It is why we are focusing our efforts and resources in these areas and why we have made accelerating their growth a priority. This strategic focus has already resulted in positive outcomes, creating a company with compelling financial characteristics: stability, profitability and strong cash generation.

## **Our business model built on our competitive advantages**

Our business model is the result of a series of strategic decisions made over the years that include a set of unique competitive advantages we believe are sustainable over the long term. This collection of four competitive advantages provide tangible benefits, are difficult to replicate and separate us from our peers. These advantages are:

- a strong foundation of manufacturing and differentiated technology
- the broadest portfolio of differentiated Analog and Embedded Processing products
- the broadest reach of market channels, and
- the diversity and longevity of our products, markets and customer positions.

Together, they help position TI in a unique class of companies capable of growing, generating and returning significant amounts of cash for our owners. We continue to invest to strengthen and leverage these advantages with a view toward the long term.

### **Manufacturing and technology**

We have chosen to make manufacturing and technology a core competitive advantage because it delivers tangible benefits. Our Analog technologies have life spans that can range up to 30+ years, and we invest in manufacturing technologies that differentiate the features of our chips. We also do

most of our production in-house as opposed to outsourcing it. By owning our own factories, we have a structural cost advantage and more control over our supply chain that supports our approximately 100,000 customers.

We also benefit from our 300-millimeter manufacturing. This larger wafer size translates into more chips per wafer and cost advantages because a chip built on 300-millimeter wafers costs about 40 percent less than an unpackaged chip built on 200-millimeter wafers, the size used by most of our competitors.

**~40% Cost Advantage**  
**Chip cost on 300mm vs. 200mm wafer**

Because we manufacture in-house vs. outsourcing and because of the inherent advantage of 300 millimeter, we enjoy a manufacturing cost advantage. Today, we have two wafer fabrication facilities dedicated to 300-millimeter Analog production, and we expect the majority of our future Analog growth to occur on this cost-advantaged capacity.

### **Broadest portfolio of differentiated Analog and Embedded Processing chips**

The second competitive advantage is the breadth of our product portfolio. With leadership positions in most analog categories, we have more differentiated parts to meet our customers' needs than any of our competitors. It gives us the opportunity to expand beyond a single chip our customers' design engineers might have originally sought to offering multiple chips or a system solution needed to solve even more of their design challenges. This product breadth gives us access to more customers and the opportunity to solve more of their problems, giving us the chance to generate more revenue per system and putting us in a position to grow revenue faster than our competitors.

We've seen steady growth in both Analog and Embedded over time. Combined, they've recorded five- and ten-year CAGRs of 8 percent. Now comprising 90 percent of TI revenue, we believe Analog and Embedded performance will translate into top-line revenue growth for the company in the years ahead.

We invest more than \$1 billion in R&D each year to develop new products, and because we focus on the quality of the portfolio, our products remain differentiated, are long-lived and generate good returns.

### **Broadest reach of market channels**

Our third competitive advantage is the size and reach of our market channels. Our global sales and applications support team is large – two, three and sometimes five times larger than those of our peers. This allows us to put more feet on the street to directly support more customers and to sell into more of their projects.

Increasingly, many customers begin their design process using the web to search for the best chips suited for their systems. The breadth of our product offerings draws more design engineers to TI.com, which has 2x more visitors than our competitors. The net result is that the broad reach of our market channels, which is our large sales

and applications team combined with our website, gives us access to more customers and more projects, and therefore, the

**2x Visits  
to TI.com  
vs. our competitors**

opportunity to win more sockets in each project. It also allows us to get smarter about what our customers want because with every interaction we learn more about what customers need and how our chips can support those needs.

### **Diversity and longevity**

Our fourth competitive advantage is the diverse and long-lived positions inherent in our markets and products. Diversity means we are not overly reliant on any one market, application, customer or product. We view this diversity as highly desirable because, with it, our success is not singularly dependent on choosing the next winning application or market. Instead, we can participate in both high-profile, large-volume opportunities and innumerable smaller-scale applications that can span many markets and thousands of customers. A more diverse customer base means less dependency on any single customer or application and a longer tail of revenue coming from the broader market. In total, diversity somewhat insulates us from the rise or fall of any one customer or market, which

translates into higher and more sustainable long-term growth. Our focus on the industrial market, which is highly diverse, reinforces this strength.

Longevity means the chips we design and the sockets we win live for a long period of time.

The chips used in the industrial and automotive markets, two areas of strategic focus, have long life cycles lasting years, especially when compared with the more turbulent profile of customized chips for short-lived personal electronics products. In addition, the process technologies and manufacturing assets used to produce our chips have long life spans. This longevity translates into higher returns on our investments.

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**Longevity means the chips we design and the sockets we win live for a long period of time.**

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Because of the diversity and longevity of our products, markets and customer positions, owners can have high confidence in the high terminal value for the portfolio.

We believe the combined effect of these competitive advantages – manufacturing and technology, a broad differentiated product portfolio of Analog and Embedded Processing chips, a broad market channel reach, and diversity and longevity – sets TI apart from our peers and will for a long time to come.

### **Our capital management strategy**

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The choices we have made as we have developed and honed our strategy have produced positive results: over time, we've invested for growth, gained share, expanded our profitability and created a set of competitive advantages that generates sustainable free cash flow\* growth.

Our capital management strategy reflects our belief that free cash flow growth, especially on a per-share basis, is most important to maximizing shareholder value over the long term, and that free cash flow will be valued only if it is productively reinvested in the business or returned to shareholders.

\* *Free cash flow = Cash flow from operations less Capital expenditures.*

At the core of our capital management strategy is our business model, which, as we've already described, is firmly rooted in analog and embedded processing products and is combined with a set of unique competitive advantages that we believe are sustainable over the long term.

The net result is the sustainable capability for strong cash generation. Our business model and competitive advantages have enabled our company consistently to generate solid free cash flow margins. In 2017, we converted 31.2 percent of revenue into free cash flow, placing our free cash flow

**31.2%**  
of REVENUE

Converted to  
free cash flow in 2017

generation in the top 15 percent of companies in the S&P 500.

Our free cash flow per share has been steady and growing over the past 10 years despite, at times, difficult macroeconomic or market environments.

Our strong balance sheet enables us to fully fund pensions and have access to low-cost debt. With interest rates at historical lows, we plan to continue to hold debt as long as it makes economic sense. Even then, we use debt judiciously such that we avoid concentrated maturities while we maintain our strategic flexibility.

Combined, these elements allow us to invest for our future and still have excess cash available to return to shareholders. Over a 10-year period, 2008-2017, we allocated \$72 billion across these areas:

- \$32 billion on R&D, sales and marketing, capital expenditures, and cash used for inventory to support the organic growth of our businesses. Our R&D expenditures are disciplined and focused on markets we believe have the greatest growth potential. While every market has areas of opportunity that are important to us, we believe industrial and automotive will be key drivers for semiconductor growth in the years ahead, and therefore, are focusing more resources in these areas.
- \$22 billion on consistent share repurchases, intended to generate the accretive capture of free cash flow for long-term investors. We focus on consistent repurchases when the stock price is below the intrinsic value, using reasonable growth assumptions.

- \$11 billion on dividends, designed to appeal to our broader set of investors, with a focus on sustainability and dividend growth.
- \$7 billion on acquisitions to fund inorganic growth, such as our 2011 acquisition of National Semiconductor. We look at an acquisition opportunity through two lenses. First, it must be a strategic match, which for us translates into an entity that is analog- and catalog-focused with a high exposure to industrial and automotive. Second, it must meet certain financial performance levels such that it generates a return on invested capital greater than our weighted average cost of capital, as one example, in about four years.

Recently enacted tax reform will enable U.S.-headquartered companies, like TI, to compete more effectively on a global basis. With more cash available on an ongoing basis, we will continue to invest in growing our businesses, strengthening our competitive advantages and returning all free cash flow to owners.

Our goal is to return all of our free cash flow to owners in the form of dividends and stock repurchases. We have a robust model to allocate returns between dividend growth and stock repurchases. This strategy reflects management's confidence in our business model, and importantly, our commitment to shareholder returns.

In 2017, TI generated \$4.7 billion of free cash flow, or 31.2 percent of revenue, and we returned \$4.7 billion in total to our owners.

**\$4.7B**

Free cash flow  
generated in 2017

8% CAGR since 2004

In October 2017, we raised our quarterly dividend 24 percent to \$0.62 per share, or \$2.48 annualized, our 14th consecutive year of dividend increases. We have increased the dividend at a compounded annual growth rate of 24 percent over the last five years. Our dividend in 2017 consumed only about 45 percent of free cash flow. This shows there is still plenty of runway ahead of us to support our objective of dividend sustainability and growth, an important element of our capital management strategy.



We focus on consistently repurchasing shares when the intrinsic value of the company exceeds its market value. Since 2004, we have reduced our shares outstanding by 43 percent, including a 1.3 percent reduction in 2017.

## 14 Years Consecutive dividend increases

The consistency of our dividend and share repurchase practices demonstrate our confidence in our business model and our commitment to return excess cash to owners.

TI is one of the few companies that is both a top cash generator and returner among S&P 500 companies. We believe TI is able to grow, generate cash and return it to shareholders in a way that few companies can match.

Our capital management strategy has continued to serve our owners well. Free cash flow per share continues to grow steadily, while we continue to invest to strengthen and leverage our long-term competitive advantages.

## Our financial segments

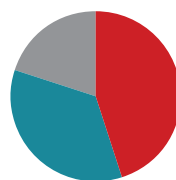
TI has three segments: Analog, Embedded Processing and Other. Our segments align with how we manage the company. We view Analog and Embedded Processing as our core businesses. Both offer us the opportunity for growth, solid profits, greater stability and compelling cash generation. Our Other segment also adds value to TI. Although the product lines and revenue streams in this segment tend to have lower growth rates, they provide high returns given the relatively low level of investment they require.

### Analog

Analog is our largest segment with 2017 revenue of \$9.90 billion, or about 66 percent of our total revenue. The market is large – about \$53 billion in 2017 according to external sources – and growing, but it is very fragmented. We hold the leading position in this market with about 19 percent share, and we believe that we are well positioned to increase our share over time. We view Analog as a growth opportunity for TI.

Every electronic product requires analog technology because analog provides the power to run devices and is fundamental to how technology interfaces with human beings, the real world and other electronic devices.

Our Analog business includes Power, Signal Chain and High Volume products. Power products help customers connect and manage power in electronic systems, and our portfolio does this across different voltage levels and requirements. Signal Chain includes products that sense, condition and measure real-world signals to allow information to be transferred or converted for further processing and control. Finally, High Volume includes integrated analog and standard products that are primarily sold into markets such as personal electronics, industrial and automotive.



2017 Analog revenue - \$9.90B

- ~45% Power
- ~35% Signal Chain
- ~20% High Volume

While we have many products optimized for specific applications, most of our Analog business focuses on catalog products that can be sold to many different customers who use them in a wide range of applications. We intend to continue to focus on catalog products as the diversity and long life cycles typical of these products are advantageous.

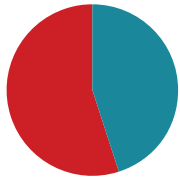
### Embedded Processing

Embedded Processing is also one of our core businesses with 2017 revenue of \$3.50 billion, or about 23 percent of our total revenue. Like Analog, this is a large, attractive market – according to external sources about \$20 billion in 2017 – also with a fragmented competitor base. Our 2017 Embedded Processing revenue represented about 18 percent of this fragmented market. Over time, this business has a proven history of outperforming the market.

Embedded processors are the “digital” brains of many types of electronic equipment. They are designed to handle specific tasks and can be optimized for various combinations of performance, power and cost, depending on the application.

Our Embedded Processing business consists of two product lines, Connected Microcontrollers

and Processors. Microcontrollers are self-contained systems with a processor core, memory and peripherals designed to control a set of specific tasks in an electronic equipment. Processors include digital signal processors (DSPs) and applications processors. DSPs perform mathematical computations almost instantaneously to process or improve digital data, while applications processors are designed for specific computing activity.



**2017 Embedded Processing revenue - \$3.50B**

- ~55% Connected MCU
- ~45% Processors

An important characteristic of our Embedded products is that our customers often invest their own R&D to write software that runs on our chips. Once a customer writes software on our platform, they tend to want to re-use that software investment from generation to generation of their product. As a result, relationships with these customers tend to be long-lasting and strategic.

**Other**

We group all our remaining revenue in a segment called “Other.” This segment’s revenue was \$1.56 billion in 2017.

“Other” adds significant value to TI. Although there are some differences in the various business models represented in this segment, in general, these product lines have a profit contribution that is attractive, where our investments are minimal and aligned with our expectations.

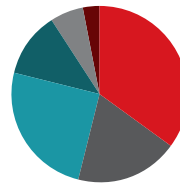
“Other” includes product lines such as DLP® products, calculators and custom ASIC products. In addition, it can include other items such as acquisition charges, restructuring charges and certain corporate-level items.

**Our end markets**

We sell our products into a diverse set of six end markets that we have identified and grouped by their life cycles and market characteristics. We also have identified more than 35 subcategories,

or sectors, within these six end markets, reflecting the diversity of the markets and applications we serve. For example, in industrial we have 14 sectors, with no single sector having more than a mid-single digit percentage of TI revenue in 2017.

**2017 Revenue by end market**



- ~35% Industrial
- ~19% Automotive
- ~25% Personal electronics
- ~12% Communications equipment
- ~6% Enterprise systems
- ~3% Other

Together, industrial and automotive, which are areas of strategic emphasis for TI, represented about 54 percent of our revenue, an increase of 10 percentage points since 2014.

**Our commitment to continuous improvement**

Over the past few years, we’ve spent a lot of time defining, developing and implementing plans to ensure TI keeps getting stronger for many years to come. We intend to continue to focus our investments in the best products and the best markets. This means pursuing growth opportunities in Analog and Embedded Processing, which currently comprise 90 percent of our revenue.

We want industrial and automotive to be a bigger part of our future because of the diversity, long product lives, growth opportunities and solid returns on investments they will provide. We are making good progress in building a larger presence in these important markets.

We want more revenue coming from catalog and application-specific standard products as they have attributes that matter to us: long product lives, many customers, good profitability and great representation in industrial and automotive.

We also would like to see more diversity in our customer base as this provides more stability and growth opportunities. This means more engagements with small customers and new wins with large customers.

To help translate these objectives into actions, beginning in 2012, we launched a number of company-level initiatives to take execution across all disciplines to the next level and make it a consistent advantage for TI. To cite a few examples, we created playbooks for our product lines and sales teams to infuse all our people with a common language and framework for running their organizations and establishing baselines of best practices. This discipline has increased our rates of learning and improvement, and is helping us get to market faster, accelerate our product launches and sell more intelligently. We are also working to make TI.com the starting point and the ending point for design engineers as they choose chips for their systems.

We also remain committed to increasing our levels of innovation. Whether we are creating new products or taking existing products to a new level, we want to deliver differentiated and market-changing chips to the world's electronics makers. It's why we exist, it's what we invest in and, ultimately, it's how we are able to generate returns to our owners.

## Summary

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We believe we are focused on the best products – analog and embedded processing – and the best markets – industrial and automotive – in the semiconductor industry. This is where we are focusing our time, our energy and our resources as a company.

We believe the ultimate measure for any enterprise is superior long-term growth of free cash flow. In 2017, our free cash flow grew 14 percent to \$4.7 billion, reflecting the ongoing strength of our business model. We have the opportunity to grow free cash flow well into the future both through top-line revenue growth and incremental gains in free cash flow margin.

**14%**  
Free cash flow  
growth in 2017

The design of our business model enables us to commit to a capital management strategy that allows us to make all the required investments in R&D, marketing and manufacturing and then return all of our free cash flow to our owners.

Our work is not done, nor will it ever be. In the years ahead, we expect TI to be known for its flawless execution in product development and manufacturing, its superior cash generation and cash return practices, its ability to create new and better product solutions to address our customers' needs while also helping make the world and people's lives better through our innovations and technologies. As we pursue these objectives, our TI employees will continue to adhere to the high ethical standards that have been a hallmark of TI since its earliest days and remain an integral element of TI culture.