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# Core, Clear and COVID

*A case study of Danfoss' Core & Clear Strategy  
and its implications for the company's performance  
during the COVID-19 Pandemic*

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“An organization’s ability to learn,  
and translate that learning into action rapidly,  
is the ultimate competitive advantage.”

**Jack Welch**  
*(CEO of General Electric 1981-2001)*

## **Acknowledgements**

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I do not see this thesis as the conclusion of just my Master's degree. Rather, I perceive this paper as the culmination of 16 years of education and personal development. Looking back at all those years I owe acknowledgement to more people than I can realistically mention here, but the following is an honourable attempt nonetheless.

My academic career has taken me to five of the best universities in the world that all contributed to meaningful and insightful experiences. CBS gave me the academic foundation to flourish anywhere, the U of A reminded me that Denmark is not the centre of the universe, and Queen's gave me a cultural experience that has made me a better person in more ways than I can count. At WU in Vienna, I discovered a second home, and CLSBE gave me the final preparation I needed to embark on my professional career.

The apex of this journey is the thesis you are about to read, and I must recognize the people that helped me. Firstly, this thesis would not have been possible without the support from Tian Xia of Danfoss. Her inspiration, insights, and network were invaluable to the project and I owe her a great deal of gratitude. Secondly, Prof. Ricardo Reis' support came in handy on several occasions and he must be accredited with some of the glory of the final outcome. Finally, my roommate was my ongoing thesis partner and we improved each other's work substantially.

The long voyage I have been on to the completion of this project has been enabled by so many. Friends from around the world has given my fresh perspectives and elevated my academic and professional capacity – all of which is evident from the quality of this project. But I especially owe my family a great deal of acknowledgement for getting here. Without the love and support from home studying abroad for more than two years at demanding institutions would not have been possible.

I regret that it could not have been a painting or a dope rap album, but I hope you appreciate this thesis as my tribute to all of you.

## **Abstract**

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The literature on dynamic capabilities is lagging behind on case studies that can assist the strand in achieving theory status. Therefore, this thesis' contribution is a case study of Danfoss and the impact of its Core & Clear strategy, which the company implemented in the aftermath of the GFC. The research examines, firstly, if Danfoss improved its financial performance in 2020 (the COVID-crisis) compared to 2009 (the GFC) before the Core & Clear strategy was implemented in 2010. I also take the preceding years for each crisis into account, making the entire period of analysis span from 2000 to 2020. Here I find that the Core & Clear strategy is correlated to improvements in all variables that relate to efficiency and profitability, meanwhile, revenue growth was worsened. Secondly, I inspect Core & Clear's impact on Danfoss' dynamic capabilities. Based on semi-structured interviews, I conclude that Danfoss improved all propensities of dynamic capabilities based on Barreto's (2010) definition. Lastly, I triangulated these conclusions with third-party experts, which supported that Danfoss' Core & Clear strategy would have improved the company's ability to handle the COVID-crisis.

The implication of the research is, firstly, a support of the links from dynamic capabilities to profitability and efficiency. Secondly, I find that dynamic capabilities are important for Danfoss' industry and environment, contributing to a resolution of these disputes in academia. Lastly, further research would enrich the literature by substantiating these findings through other methods such as longitude, comparable research designs and observational studies.

**Keywords:** dynamic capabilities, performance, competitiveness, crisis, COVID, strategy, adaptive strategy, efficiency, profitability, resource-based view.

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## Resumo

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A literatura sobre capacidades dinâmicas está atrasada em casos de estudo que permitam suportar uma posição teórica. Consequentemente, esta tese fornece um contributo baseado no caso de estudo sobre a Danfoss e a sua estratégia Core & Clear, que foi implementada pós crise financeira global. A pesquisa examina, primeiramente, se a Danfoss melhorou a sua performance financeira em 2020 (crise COVID) comparativamente a 2009 (crise global financeira), antes da estratégia Core & Clear ter sido implementada em 2010. Tenho também em consideração os anos precedentes a cada crise, fazendo a minha análise entre 2000 e 2020. Aqui, encontro que a estratégia Core & Clear alcançou melhorias em todas as variáveis relativas a eficiência e rentabilidade, enquanto o crescimento de receitas foi afetado. Seguidamente, analiso o impacto da Core & Clear nas capacidades dinâmicas da Danfoss. Baseado em entrevistas semiestruturadas, concluo que a Danfoss melhorou todas as suas capacidades dinâmicas, segundo a definição de Barreto (2010). Por último, triangulei estas conclusões com especialistas independentes, que defendem que a Core & Clear teria melhorado a capacidade da empresa em lidar com a crise COVID.

A implicação da pesquisa é, primeiramente, o sustento das ligações entre capacidades dinâmicas e eficiência e rentabilidade. De seguida, encontro evidências de que as capacidades dinâmicas são importantes para a indústria e ambiente da Danfoss, contribuindo para uma resolução destas disputas académicas. Por fim, uma pesquisa exhaustiva iria enriquecer a literatura ao substanciar estas conclusões através de outros métodos, como longitude, projetos de pesquisa comparáveis e estudos observacionais.

**Palavras-chave:** capacidades dinâmicas, performance, competitividade, crise, COVID, estratégia, estratégia adaptativa, eficiência, rentabilidade, visões baseadas em recursos.

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## List of abbreviations

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Business Units:	BU
C&C:	Core & Clear
DBS:	Danfoss Business System
DC:	Dynamic Capabilities
EBIT:	Earnings before interest and tax
EBITDA:	Earnings before interest, tax, depreciation, and amortization
E.g.:	Exempli gratia
ETC.:	Et cetera
GFC:	Global Financial Crisis
IO:	Industrial Organization
KBV:	Knowledge-Based View
KPI:	Key Performance Indicator
R&C:	Resources and capabilities
RBV:	Resource-Based View
ROA:	Return on assets
ROC:	Return on capital
ROE:	Return on equity
ROS:	Return on sales

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## **Chapter 1. A phoenix of the Global Financial Crisis**

The story of Danfoss could be in several departments of a library. E.g., the story of the engineer who went against his parents' expectations to pursue his passion for innovation would easily be a romance or adventure. Meanwhile, the story of a company's close call with collapse during the global financial crisis might be more of a thriller. But in the intersection between the genres, there is a story best placed on the non-fiction shelf on the topic of strategy. That is the story I will tell in this thesis.

Historically, Danfoss has been an important part of the Danish industrial scene. Since its foundation, Danfoss has contributed several life changing inventions, such as the world's first thermostatic expansion valves and – perhaps most famous - the radiator thermostat. The founder's family had been running the company for most of the time between the 1930s until the late 2000s when Danfoss ran into trouble. Here, the global financial crisis (GFC) started to show cracks in the company's structure and strategy.

The paper, Jyllands Posten, wrote the following in April 2008 (Lunde, 2015, p. 41):

*Danfoss is selling more products than ever but Denmark's largest industrial company has difficulties keeping up profitability. Profitability targets for last year were not reached and is still under pressure in 2008<sup>1</sup>.*

Shortly before the article was published, Danfoss' board had a meeting. The most recent numbers were not promising and showed increasingly more reasons to be worried. For instance, profitability had dropped to index 85. The board was faced with the tough realization that if a crisis were to seriously impact demand, the company would not be easily able to handle it (Lunde, 2015). Unfortunately, the GFC would eventually confirm the board's worst nightmare.

But as any great story would have it, the hero persevered, and in this case Danfoss displayed willingness to act. New leadership was brought on-board in 2008 and last year in 2020 the

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<sup>1</sup> Author's translation

company showed more than 3bn DKK in profits during the COVID-crisis (Danfoss, 2021). In comparison, they lost more than 1bn DKK in 2009 when the GFC was worst for the company. This sparks many questions, but most interestingly for me: were the crises just very different or did something happen internally? While the former is true according to many scholars and professionals, so could be the latter, and the curiosity grew as I dug deeper.

In 2010, Danfoss initiated the Core & Clear strategy as a response to the GFC, which was a major turn-around for the company. It even inspired the book by Lunde (2015), “The New Danfoss”, speaking to how influential it was. In an academic perspective this is interesting for literature on dynamic capabilities. Since Danfoss at first glance seem to perform better during COVID, which was after the implementation of the Core & Clear strategy in 2020, it would be a great stride for academia if we could find evidence that it had improved their dynamic capabilities. Therefore, I chose to take this task upon myself in addressing the research question:

*Did the Core & Clear strategy improve Danfoss’ ability to tackle the COVID-crisis?*

In this pursuit, I firstly endeavour to confirm if Danfoss improved its financial performance. I achieve this by investigating several accounting measures from financial reports of Danfoss, its competitors, and comparable Danish firms from 2000-2020. Secondly, I uncover the company’s dynamic capabilities through interviews with employees, and lastly, I triangulate all findings with an outside perspective from business professionals.

I have structured the thesis as the following. Firstly, I provide the relevant background knowledge on Danfoss and the Core & Clear strategy in chapter 2. Next, chapter 3 takes the reader through a review of standing literature that I based my research on, followed by chapter 4 on methodology and hypotheses development. Chapter 5 reveals my findings, which we reflect upon in chapter 6 touching on its limitations and implications. Finally, chapter 7 contains my concluding remarks.

## Chapter 2. Danfoss and the Core & Clear strategy

Danfoss often has little meaning to people outside of Denmark, unless of course they work in one of the many industries Danfoss serves. To account for this, Chapter 2 provides a brief introduction to Danfoss and the problems it incurred during the GFC. Secondly, I summarize the strategic changes they implemented to tackle those challenges, which were conceptualized in the “Core & Clear strategy”.

### Introduction to Denmark’s largest industrial company

Danfoss’ history goes back to the early 1930s, where son of a farmer, Mads Clausen, founded “Dansk Køleautomatik og Apparatfabrik” (Author’s translation: “Danish cooling automatic and devices factory”), which built thermostats and valves (Danfoss, n.d.). The business quickly grew and in 1946 it changed its less-than-catchy name to *Danfoss*, which had a more international ring to it.

Today, Danfoss can be defined as an engineering company that designs and manufactures mechanical and electrical components. In a nutshell, these components improve the energy efficiency of the process in which they are integrated.

Danfoss has divided its business units (BU) into three segments: Climate Solutions, Power Solutions and Drives. Climate Solutions manufactures components for systems like fridges and air conditions and contributes DKK20 billion<sup>2</sup> (\$3.2 billion) to Danfoss’ total revenue equivalent to 43 percent. Power Solutions is the division that builds components for larger industrial machines. For instance, John Deere is a big customer of Danfoss Power Solutions, and the segment contributes around 34% to total revenue. Danfoss Drives builds components that allow electrification of fossil powered motors. It can simply be described as the gearing system for an electric powered motor, which can be applied to electric vehicles like busses, cars, and ships. Currently, this segment contributes DKK12 billion (\$1.9 billion equivalent to 23% of total revenue).

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<sup>2</sup> Revenue shares from the article, ” Danfoss lægger milliardforretninger sammen” (Pedersen, 2020b).

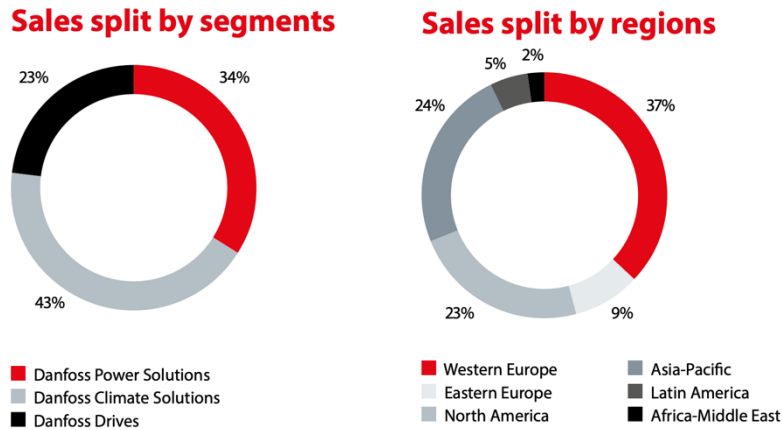


Figure 1: Danfoss' sales by segment and region in 2020 (Danfoss, 2021)

Today, Danfoss is present in more than 70 countries with manufacturing facilities in more than 20. The company is headquartered in Nordborg, Southern Denmark and is 50% owned and controlled by the Bitten & Mads Clausen foundation, employing around 30,000 people.

The company has managed to position itself as a global leader in every market it competes in. Moreover, Danfoss has become known as an innovator specifically within digitalization, which has been a major focus of the company in recent years and will continue to be so according to CEO, Kim Fausing (Danfoss, 2011; Pedersen, 2020a).

In many ways, the story of Danfoss is a great romance of a pioneering innovator trying to save the world through energy efficient solutions. But they also saw its fair share of bleak days. The company encountered major struggles during the GFC, the events of which sparked the Core & Clear strategy that forms the foundation of this thesis. But before we get into the cure, let us get a better understanding of the diagnosis.

### 2009: the wake-up call

*“2009 was by far the most challenging year in Danfoss' history.”*

Danfoss Annual report of 2009 (2010)

There was no denying the facts when Danfoss in 2010 looked back at the impact of the GFC. The declining demand across all of Danfoss' markets had taken a critical toll on the company and forced several weaknesses to surface.

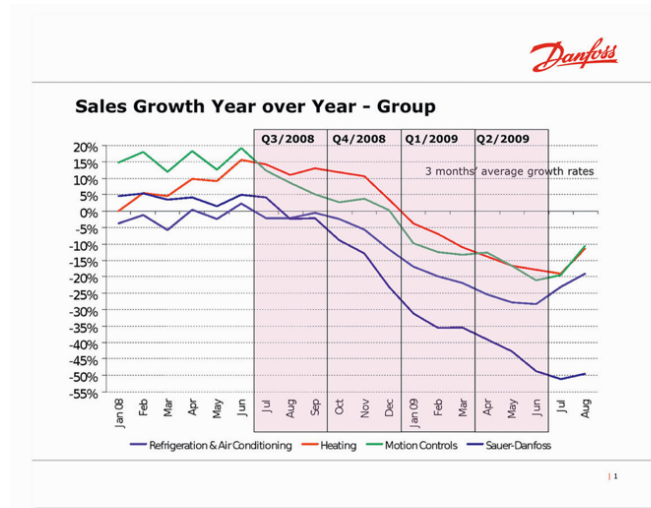


Figure 2: 2009 hit all Danfoss' business segments hard (Lunde, 2015, p. 87)

In the years leading up to the GFC, Danfoss had employed measures that had not always had the strategic alignment that Michael Porter and Richard Rumelt would have prescribed. This had caused two major problems with high debt and low cash flow (Lunde, 2015).

A potential source of the problems was that Danfoss had become several companies in one, allowing each segment to operate independently. This caused three critical issues (Lunde, 2015):

*i) Lack of Customer focus*

Danfoss needed to differentiate itself more clearly from competitors and do so with a focus on higher quality. There was no clear line of communication with customers and Danfoss had become the very opposite of customer centric (Lunde, 2015).

*ii) Inefficient processes*

Because each segment was operating more or less as an individual company, Danfoss was not reaping the benefits of its scale. Many processes were too specialized where it could have been standardized. This meant it was difficult to define KPIs across the group as there were several different systems and processes to account for, which also meant the organization was not very transparent (Lunde, 2015).

*iii) No alignment and common direction*

The isolated segments also meant there was no clear definition of what Danfoss was and what it was supposed to be. There was no clear idea of what the value proposition and core competences should be, and thus there was also confusion about which industries Danfoss should even operate in (Lunde, 2015).

### The response: The Core & Clear strategy

As these struggles became too substantial to ignore, a new direction was set in Danfoss in 2010 with the Core & Clear strategy. It was an ambitious undertaking, the full-scale of which is too comprehensive to cover here. However, the following will serve as a recap the four pillars of the strategy and the measures Danfoss' took under each. The four pillars were (i) Core & Clear<sup>3</sup>, (ii) Free & Agile, (iii) Customer & Innovation, and (iv) Passion & Performance.

#### (i) Core & Clear

Danfoss went from their traditional acquisition strategy to only focusing on the company's own core competences. Essentially, this meant Danfoss sold off all businesses that they deemed could find more suitable owners elsewhere.

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<sup>3</sup> It might be confusing that this pillar shares name with the overall strategy, so for the remainder of the paper I will refer to the overall strategy as C&C, while the pillar will be explicitly referred to as the Core & Clear pillar.

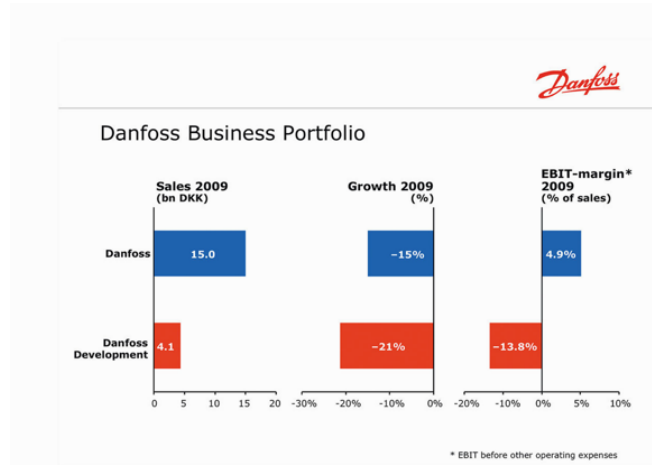


Figure 3: "Danfoss" captures the BU that leadership considered core, while "Danfoss Development" represents the remaining BU. The core businesses still made money from operations, while it was clear the portfolio included several unprofitable ventures (Lunde, 2015, p. 157).

Danfoss dedicated themselves to being number one or two in every market by providing highest quality and innovation. This meant they would not add resources to divisions that did not directly add to Danfoss' competitiveness (Danfoss, 2011; Lunde, 2015, p. 112). Therefore, Danfoss formulated new criteria (figure 4) for their portfolio strategy, so it only contained competences that were core for its differentiation with a continued focus on future areas for innovation.

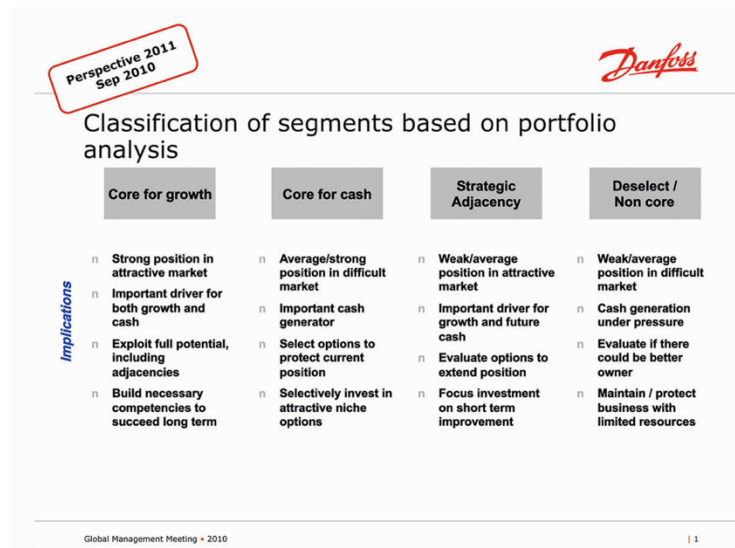


Figure 4: New criteria for Danfoss' portfolio (Lunde, 2015, p. 298).

With these criteria in mind Danfoss' leadership dissected the group to understand how Danfoss' units were complying with them. Their findings astounded even veteran Danfoss leaders (Lunde, 2015).

Figure 5 shows an overview of Danfoss' portfolio at the time. In the process of implementing the Core & Clear pillar, Danfoss went from more than 20 BU to less than 10. Examples of exited businesses were Household Compressors, Water Valves and Gear Motors. Even though some exited businesses had acceptable growth rates and profitability, there simply was a mismatch with the new strategy (Lunde, 2015).

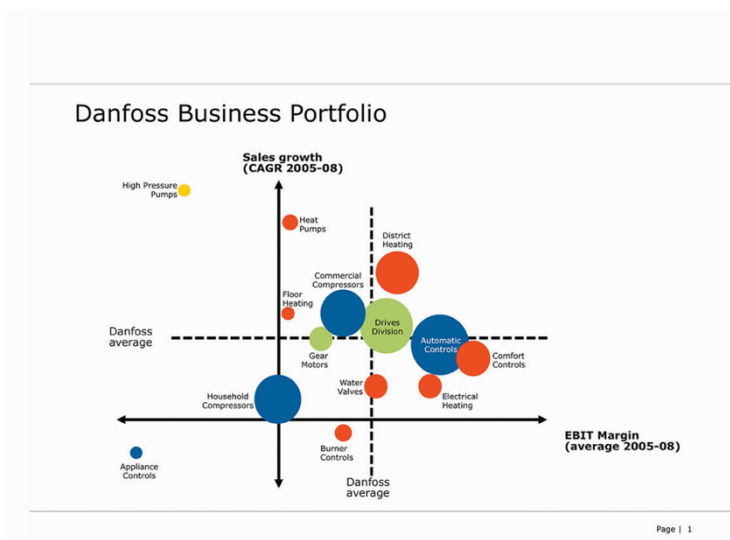


Figure 5: Overview of Danfoss' BUs. Size of ball represents revenue, colors indicate which segment it belongs to.

## (ii) Free & Agile

This pillar of the strategy was targeting the cash flow problem by optimizing the company's supply chain. The work with Free & Agile can be explained in four areas of measures:

### *Outsourcing*

Danfoss had been undertaking many functions that were not core to the business and draining cash flow. The main objective was that only activities that contributed to the company's core competence and differentiation would stay in-house (Lunde, 2015). For instance, Danfoss outsourced inventory management as a part of Free & Agile.

### *Offshoring*

Offshoring was a process of placing production in more optimal locations. This was executed with a focus on not just labour costs but also proximity to current markets, and the markets that would be expected to grow in the future (Lunde, 2015, p. 352):

### *Complexity reduction*

This area had the target of reducing number of products and suppliers. Sales staff could not gain a complete overview of Danfoss' products<sup>4</sup>, R&D was developing components with modest demand, and logistics had become a nightmare with large storage facilities with thousands of different components (Lunde, 2015). These were just a few of the reasons that complexity had to be addressed.

In essence, this process relied on firstly identifying which products were selling, and problem was evident in the many products they found had not sold for more than 12 months. Next, they defined clear criteria for creating new products, and monitored all existing to justify their existence. The process allowed Danfoss to decrease number of products by 26% (Lunde, 2015).

### *Global Service*

Global service was a centralization of administrative tasks. Departments like finance, HR, and purchasing were standardized and controlled from a group level. This made Danfoss more flexible and able to reap cost synergies from scale.

### *(iii) Customer & Innovation*

It had become clear Danfoss needed to become closer to their customers, break off from the past's mantra "begejstring for teknologi" ("excitement for technology"), and adopt one where innovation had customers at the center. This pillar included several initiatives but the most ground-breaking for the company was a new innovation process.

The new standardized innovation processes consisted of three phases. First phase, "Front-End", was the creative stage where an innovation would be developed with the focus on customer needs. The second phase, "Execution", was determining if the innovation would be put into production.

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<sup>4</sup> At the time Danfoss had more than 300,000 products (Lunde, 2015, p. 358).

The last stage, “Launch”, was selling the new product. These three phases were standardized through Danfoss Business Systems (DBS), which was an internal consultancy of sorts. DBS was in charge of standardizing several processes across functions and segments in Danfoss across product development, procurement, sales, and marketing.

#### (iv) Passion & Performance

This last pillar of the strategy pertained to Danfoss’ ability to execute C&C. Its objective was to build commitment, a clear direction, and common goals for the entire company to ensure the success of the overall strategy. Some of the initiatives were:

- People reviews where talents would be reassigned every two years to ensure development, mobility, and flexibility.
- Employee surveys used to evaluate effectiveness of communication of the C&C strategy.
- 47 KPIs for the entire organization, such as the proportion of deliveries on time, defect parts per million, and other more generic financial metrics such as EBIT.

\*\*\*

This sums up the major changes associated with the C&C strategy. At face value, it seems like these changes had the right ingredients to help the company tackle the COVID-crisis. For instance, the increased agility of the supply chain provided more flexibility, which likely was useful during 2020. Moreover, increased customer-centricity and breakdown of silo structures through companywide performance metrics seem like initiatives that would have improved.

In the next chapter, we will cover what the existing literature would say about these changes, and construct hypotheses based on it. This will guide our research and help us find if the C&C strategy helped Danfoss during the COVID-crisis.

## Chapter 3. A review of the state of the art

This thesis relies on previous scholars related to competitiveness. Specifically, research on how to adapt under changing market conditions is important prerequisite knowledge. Therefore, the following will take the reader on a brief stroll down the memory lane of competitiveness, with a focus on the topic of dynamic capabilities. This review will in turn be used to construct two hypotheses for the research.

### Early approaches to competitiveness

The study of competitiveness goes way back to 1942 when Schumpeter posited the process of “creative destruction”. He predicted that capitalistic forces would create a cycle of incumbents being destroyed by innovative newcomers only to be destroyed themselves once they became the incumbent (Schumpeter, 1942). It was a question of new technologies rendering the former obsolete, which seems relatable with stories like Blockbuster reacting too late to Netflix and Apple taking over the reins from Nokia.

In the immediate years after Schumpeter, competitiveness developed in two opposite directions with conflicting views on what drives firms’ success. These can be imagined as a scale based on the dependence of endogenous factors in firm success ranging from *selection* to *adaption*. On the selection end of the scale, firms’ success is mainly a result of exogenous factors (therefore, firm survival is kind of a *natural selection*) (Hannan & Freeman, 1977, 1984). In the adaption perspective, scholars believe a firm’s survival mainly is caused by endogenous factors. An example can be Upper Echelon’s theory from Hambrick and Mason (1984), who posited that top managers’ decisions are a key input for successful output.

The discussion between these two camps developed with Industrial Organization (IO) choosing the selection side, and efficiency-based theory leaning towards adaption. We will dive into that in the following.

IO picked up on the idea that exogenous factors were the main determinant for performance and introduced the paradigm of structure-conduct-performance (Mason, 1949; Mason, Stigler, & Bain, 2005). The essential idea was that the structure of an industry would determine the behaviour of

the incumbent firms, which in turn predicted the firms' performance. Another approach with roots in IO is the strategic conflict approach, which relied on elements of game theory, market imperfections and the like. Essentially, this approach predicts competitive outcomes to be a result of the effectiveness of pricing, control of information and other IO concepts (see for instance Shapiro, 1989).

This line of thought is still taught in economics classes around the world, but more important for strategy purposes are the ideas they sparked with Michael Porter a few decades later.

In 1980, Michael Porter introduced a new paradigm of competitiveness based on the ideas of industry structures, which became known as the competitive forces approach. Porter postulated that analysing the forces of a given industry would inform the firm on a strategic direction and he even proposed three generic strategies (cost leadership, differentiation, and focus) (Porter, 1980). This is also the work that introduced the famous "Porter's Five Forces", which to this day is a part of the curriculum at probably every business school in the world.

While Michael Porter's paradigm was dominant in the 1980s, the efficiency-based approach was attracting attention in the decades that followed. It was found that firms' level of efficiency and effectiveness could explain competitive outcomes, and thus it gained an increasingly important place in academia. This even became a view that Porter subscribed to himself when he found that firm-specific factors mattered more than industry factors (McGahan & Porter, 1997).

The efficiency-based approach can be split into three strands of literature that are often referred to as the resource-based view<sup>5</sup> (RBV), knowledge-based view (KBV) and dynamic capabilities (DC). The following will address the two formers, while the next section will focus on the latter.

RBV confronted previous industry-based approaches by looking *internally* at the firm's capabilities. This perspective can be traced back to the 1960s where Learned *et al.* (1969) concluded that a firm's success would be unlocked by "a competence that is truly distinctive". The RBV has been refined much since then but essentially, this approach finds that competitiveness is derived from a set of distinct and unique capabilities that are hard to imitate, and therefore these should be at the center of a firm's strategy (Rumelt, 1984; Teece, Pisano, & Shuen, 1997). As such,

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<sup>5</sup> Though RBV arguably has reached the status of "theory"

the ability of a firm to establish a leading market position is a function of its underlying resources and capabilities (R&C) (K. R. Conner, 1991). Barney (1991) elaborated by suggesting that if firms had the same resources they would also have the same profits, the logic being that if all firms had the same R&C would lead to the same level of competitiveness and thus no differentiating factor.

Other scholars supported the importance of R&C. Rumelt found that profits within industries tend to differ more than between them (1991), which aligned with Cool and Schendel's (1988) previous discovery of significant differences in the United States (U.S.) pharmaceutical industry. Moreover, Jacobsen found that ROI depends less on industry conditions (1988), while Hansen and Wernerfelt discovered that organizational factors explain twice as much variance in profit rates than economic factors (1989). In essence, these scholars (among many more) established the importance of R&C and concluded that competitiveness is not simply a question of industry structures or economic circumstances.

The next logical question would then be *how* R&C can be a source of competitiveness? To answer that we need to understand what characterizes them. A very common perspective is that the R&C must be hard to imitate for competitors (Barney, 1986b, 1986a; Rumelt, 2005; Wernerfelt, 1984), but Barney (1991) provides a larger framework for the importance of R&C. He explained that a firm's R&C must be valuable, rare, imperfectly imitable and without any close substitutes.

A convenient way to understand the RBV and the importance of R&C is by comparing the entry decision with the competitive forces approach (from Porter as discussed earlier). As summarized by Teece et al. (1997), the entry decision of the latter approach would crudely look like the following: 1) pick an industry based on its "structural attractiveness", 2) choose an entry strategy based on conjectures about competitors' rational strategies, and 3) if not already possessed, acquire or otherwise obtain assets to compete in the market (p. 514). In this view, entering any industry seems like an easy exercise. The RBV disagrees with this entry decision because firms are heterogeneous and cannot simply acquire the R&C needed to compete in any given industry (Teece et al., 1997). A reason for this is that R&C are difficult to change in the short run, and there are three reasons for this "stickiness". First, firms do not have the capacity to develop new R&C (Dierickx & Cool, 1989), second, some assets – like tacit knowledge - cannot simply be acquired

(Teece, 1976, 1980). And third, as Barney (1986b) points out there is often little to gain from actually acquiring the asset due to the high price a firm must pay.

Therefore, the RBV offers a different perspective on the entry decision that takes a point of departure in the firm's R&C rather than the industry structures.

The second strand of efficiency based theory builds on the RBV in that, "the ability to create value is not based as much upon physical or financial resources as on a set of intangible knowledge-based capabilities" (Theriou, Aggelidis, & Theriou, 2009, p. 179). Specifically, the extension itself is that the most important resource of the firm is *knowledge* (Balogun & Jenkins, 2003; Grant, 1996; Hoskisson, Hitt, Wan, & Yiu, 1999; Roos & Whitehill, 1998; Sveiby, 2001). Scholars of KBV argue that knowledge is difficult to replicate and is, therefore, a foundation for sustainable differentiation (Wiklund & Shepherd, 2003). Therefore, the most important task of the firm is to integrate knowledge from employees into products and services, and thus the distinctiveness of a firm's capabilities is determined by the ability of the firm to integrate the specialized knowledge of individuals within the organization (Grant, 1996).

Being a knowledge-based organization is therefore not about having high information content in products and services. It is rather about the intangible knowledge assets of the organization about how the firm operates and why it is like that (Zack, 2003).

Some authors have also argued that KBV is embedded in RBV. For instance, Conner and Prahalad (2002) found that knowledge is the basis of competition between R&Cs, while Helfat and Peteral (2003) pointed out that the RBV should incorporate an evolution of its resources to remain competitive. This evolution is what became the literature on DC (Curado & Bontis, 2006), which asserts that organizations gain competitiveness through their ability to adjust and react to a changing environment (Teece et al., 1997).

### Competitiveness in a changing environment

The scholars of DC found that strong R&C was not always enough to secure success – it also relies highly on a firms' ability to adapt and react to external forces as they can impact the success of the firm considerably (Audia, Locke, & Smith, 2000). These external forces are a result of an ever more challenging environment that scholars have dubbed "high-velocity" or "hypercompetitive"

environments (Bourgeois & Eisenhardt, 1988; D’Aveni, 1994). In these types of environments, it is harder for firms to maintain their competitive advantage over time (Wiggins & Ruefli, 2005) and thus firms must find a way to adapt to these external shocks and dynamically change their capabilities continuously (D’Aveni, 1994; Eisenhardt & Martin, 2000).

The idea that competitiveness needs a renewal of capabilities has been partially explored on early occasions by Penrose (1959), Teece (1982), and Wernerfelt (1984). But it was only later that academia started focusing on how organizations develop new capabilities in response to changing environments, which became the foundation for the DC literature (Teece et al., 1997).

To accomplish a more encompassing perspective on the efficiency-based view of competitiveness, DC combines organizational, functional and technological skills. Thus, contrary to other strategy concepts, DC embraces previously excluded areas such as marketing (e.g. Menguc & Auh, 2006), HR (e.g. Thompson, 2007), operations management (e.g. Fixson, 2005), information management (e.g. Sambamurthy, Bharadwaj, & Grover, 2003), and entrepreneurship and venture capital (e.g. Arthurs & Busenitz, 2006). As a result, DC “*can be seen as an emerging and potentially integrative approach to understanding the newer sources of competitive advantage*”, as phrased in the seminal work by Teece et al. (1997, p. 510). Since their work, the topic of DC has been explored by many scholars and has been published widely in top tier academic journals (Barreto, 2010).

Even though the wide-ranging literature on DC has a strong foundation in the adaptability of the R&C of the firm it also encompasses many different conceptualizations<sup>6</sup>. These can be understood by dissecting the eight dimensions of DC as presented by Barreto (2010)<sup>7</sup>. Let us briefly explore just three examples of nature, specific role, and relevant context.

Examples of the varying concepts can be found in something so basic as the *Nature* of DC, which relates to what these capabilities are. For scholars such as (Helfat et al. (2007), Teece (2000, 2007), Winter (2003), and Zahra, Sapienza, & Davidsson (2006), DC is an actual ability or

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<sup>6</sup> A full review of the DC literature is extensively explored by Barreto (2010).

<sup>7</sup> The eight dimensions being nature, specific role, relevant context, creation and evolution mechanisms, types of outcomes, heterogeneity assumptions, and purposes

capacity. Meanwhile, DC have also been conceptualized as processes (Eisenhardt & Martin, 2000) and as stable patterns and routines (Zollo & Winter, 2002).

*The specific role* of DC relates to what these capabilities are used for. Some scholars have argued that DC are the process through which a company changes its competencies (Eisenhardt & Martin, 2000), while others have employed a tiered system such as Winter (2003) and Zahra et al. (2006). In the tiered systems, ordinary capabilities are used to survive in the short term, while DC are utilized to change the ordinary capabilities over time to remain competitive. More recently, Teece (2007) added two categories of DC to the reconfiguration of capabilities in that they can be used to *sense changes* and to *seize opportunities*.

As a third example, academia also disagrees on when DC are most relevant and are divided between three views. The first perspective is that DC are only relevant in highly volatile environments (Teece et al., 1997). Other scholars offer a second perspective that DC are relevant in moderately dynamic markets (Eisenhardt & Martin, 2000). Lastly, a few scholars have argued that changing environments might not even be an element of DC at all (Zahra et al., 2006; Zollo & Winter, 2002).

These three dimensions (out of the eight in total) of DC exemplifies well why Barreto (2010, p. 270) concluded that DC is not yet a theory. He arrives at his conclusion by analysing the criteria of a substantiated theory, each of which DC is not fulfilling. A theory must have 1) a specified construct with variables of interest, 2) congruence, 3) boundaries, and 4) the contingency hypotheses<sup>8</sup>.

This positions the DC literature at a critical point, where scientific consensus around these criteria is required to come closer to an applicable theory, which I believe this dissertation can contribute to.

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<sup>8</sup> 1) a specified construct refers to a consensus around a clear definition and which variables to measure, which DC does not currently have.

2) congruence refers to the relationship between the variables. For instance, there is a significant dispute over the relationship between the strength of DC and financial performance.

3) boundaries refer to which areas the theory is applicable. As elaborated earlier, scholars of DC have not reached agreement on which environments serves as relevant context. Moreover, researchers have split opinions on which type of firms are relevant for the theory.

4) given the dispute of the specific outcomes of having strong DC the theory lacks a clear hypothesis. For example, Porter's theory was based on assuming any of his generic strategies would grant rents as long as they were in coherence with the industry structure.

### Where this paper fits in

This thesis will be relevant for several areas of the competitiveness literature, but in future reviews, I believe it will find its place in the section on DC as one of few case studies. In Barreto's (2010, p. 274) words, case studies can illuminate aspects that "*otherwise might not be captured*", but unfortunately, we do not have many examples at this point in time. In Barreto's (2010) extensive review of DC, he only highlights four case studies three of which were focused on a single organization like this thesis - the four were: Galunic & Eisenhardt (2001), Lampel & Shamsie (2003), Pablo, Reay, Dewald, & Casebeer (2007), and Rosenbloom (2000). Thus, the work conducted here will be one of only a few applications of DC in a case study format.

Case studies are important for two reasons. First, it serves the important purpose of substantiating the generalized notions about the theory, which is even more important for DC, as it is struggling to reach theory status. Secondly, case studies grant access to more specific insights on the type of actions, processes, and strategies that enable and build DC in firms. In the case here, I provide insights into the importance of DC in Danfoss' industry, which can contribute to some of the disputes the DC literature is facing. As Barreto (2010) summarizes, the literature is highly divided (among other facets) on the type of organizations and industries where DC are relevant, and this case study allows a unique insight into the example of Danfoss. In this way, it is the aim of this thesis to provide additional insights that can push the scholarly efforts closer to a common ground on some of these dividing topics and provide inspiration for research with larger scopes in the future.

### Academia's perspective on C&C: standing on the shoulders of giants

Based on existing research, I have constructed the following two hypotheses to guide my research.

First, I believe Danfoss will have performed better financially during the COVID-crisis compared to the GFC. As explained in the previous chapter, the four pillars<sup>9</sup> of the C&C strategy seemed to have improved the company's competencies – both dynamic and traditional capabilities. For instance, the implementation of the Passion & Performance pillar and DBS gave Danfoss common direction and procedures, which (on paper) enabled the company to react faster, which matches DC literature. Moreover, the Core & Clear and Customer & Innovation pillars have several actions

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<sup>9</sup> Core & Clear, Free & Agile, Customer & Innovation, and Passion & Performance

that align with theory on stronger competitiveness from RBV and KBV as the company gained stronger focus on core capabilities, and knowledge about customers, which should have improved the company's performance.

This hypothesis serves two purposes. First, it will help us pinpoint quantitatively if Danfoss showed signs of improvement after the implementation of the C&C strategy. Second, it can contribute to resolving the dispute about the link between DC and performance (Barreto, 2010). Chapter 4 will elaborate on my approach to units of analysis and measuring financial performance.

### **H<sub>1</sub>: Danfoss improved financial performance in 2020 relatively to 2009**

Proving H<sub>1</sub> will indicate a correlation between C&C and improvements in Danfoss, but to establish correlation we need a scientific consensus. Therefore, by showing improved DC in Danfoss I will be able to support the assertion that Danfoss performed better in the most recent dynamic environment, as they should have improved the ability to do so. Chapter 4 will enlighten the reader on how I investigated Danfoss' DC, and which conceptualization I have chosen as point of departure. As such the second hypothesis becomes:

### **H<sub>2</sub>: The C&C strategy developed stronger dynamic capabilities for Danfoss**

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The reader should now have a thorough understanding of the academic context of the thesis, and what it hopes to contribute. Next, we need to understand how it aims to do that, which is why the next chapter will next dive into how we operationalize the research through research design and methods.

## Chapter 4. Strategy of the thesis: research design and methodology

The last two chapters clarified the context and what I aim to contribute. This chapter will now provide the answer to *how* I intend to achieve that. Firstly, I will explain the case study design of the research, secondly, I will elaborate on the chosen methods of descriptive statistics and semi-structured interviews.

### The study of a case

As the label *case study* indicates, it is a deep dive into a specific “location”, which e.g. can be an organization or geographical (Bryman, 2012). In this thesis, I am investigating a specific strategic change within a specific organization and as such fits the criteria of this research design.

Yin (1994) also presented a guideline for how to choose the case study design, which supports the selection here (see table 1). In the context of this research, we are looking at a how-type question (“how did the C&C strategy affect Danfoss’ ability to handle the COVID-crisis?”, could be a rephrasing of the question posed here), with no need to control behaviour, while we are looking at contemporary events.

The choice of the single-case study approach was also based on access to data. The multiple-case study design or the comparable case study design could also have been useful, but with unique access to Danfoss employees, the single case study was chosen.

Strategy	Form of research questions	Requires control of behavioural events?	Focuses on contemporary events?
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many/much	No	Yes
Archival analysis	Who, what, where, how many/much	No	Yes/No
History	How, why	No	No
Case study	How, why	No	Yes

Table 1: COSMOS Corporation, cited by Yin (1994)

### A retroductive approach

When it comes to scientific reasoning, the three main camps are labelled induction, deduction, and retroduction (Moses & Knutsen, 2012). Of the three I found retroduction to be to most appropriate approach. The conventional ways of reasoning seeks to develop a new theory or test an existing one, but these are not the aims of retroductive reasoning (Belfrage & Hauf, 2017). For this approach,

the researcher attempts to make inferences about the cause of an event by investigating the question ‘what must the world be like for the event to be possible?’ and the converse, ‘what must the world be like for the event to not be possible?’ (Smith & Johnston, 2014, p. 12). In this pursuit, the retroductive approach weaves together inductive and deductive elements to uncover the underlying mechanisms causing the outcome of an event<sup>10</sup> (Beighton, 2019).

In the context of this research, I am hypothesising that the world where Danfoss’ ability to handle to COVID-crisis was improved by C&C, must be one where its financial performance and DC were improved. It might not be true, but it is nevertheless a useful starting point for gathering more evidence on the topic and retesting the findings (Smith & Johnston, 2014).

### The method arsenal

The ideal experiment would have been comparing two identical companies over the same period of time and during the COVID-crisis, with the only difference being the implementation of the C&C strategy *ceteris paribus*. Unfortunately, this remains unobtainable, but the methods chosen here will take us part of the way.

In this pursuit I have employed two methods: descriptive statistics and semi-structured interviewing. The first method has been employed to test H<sub>1</sub>. Here, I look at financial data from Danfoss and compare in two samples. I employed the second method of interviewing to investigate Danfoss’ DC in order to confirm H<sub>2</sub>. I interviewed employees in Danfoss’ leadership along with industry experts outside the company to triangulate the findings.

### Descriptive statistics for financial analysis

For this case study, I determined that descriptive statistics was most appropriate compared to inferential statistics due to the amount of data available. As Agresti et al., (2018, p. 397) emphasises, we need at least 30 cases for the central limit theorem to hold, and thus be able to grant statistical significant results. I was able to sample Danfoss plus nine competitors in its industry and another nine firms from Denmark with publicly available information. Thus, employing tools from inferential statistics on a sample of that size would likely grant unreliable results and a better applied to larger samples.

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<sup>10</sup> Follows the philosophy of critical realism.

It is worth noting, however, that a sample of the appropriate size for inferential statistics might not be possible given the finite number of comparable firms to Danfoss. Thus, this limitation is not a hindrance for obtaining reliable results, but rather a consideration for how to interpret the results for the descriptive statistical approach. We will return to this in chapter 6.

The following will elaborate more on the specific firms sampled and which financial data I examined.

### *Sampling*

I constructed two samples to conduct the research: competitors and comparable Danish firms. The former sample was chosen in collaboration with Danfoss' strategy director, Tian Xia, who identified the nine competitors showed in table 2.

<b>Firm</b>	<b>Country of headquarters</b>	<b>Revenue 2019</b> (from annual report and in €)	
ABB Ltd	Switzerland	\$27.98bn	€22.96bn
Robert Bosch GmbH	Germany	€77.72bn	€77.72bn
Donaldson Company Inc.	United States	\$2.5bn	€2.05bn
Emerson Electric Co.	United States	\$18.3bn	€15.01bn
Honeywell International Co.	United States	\$36.7bn	€30.11bn
Mitsubishi Electric Corporation	Japan	¥4,519,921m	€34bn
Parker Hannifin Corp.	United States	\$14.32bn	€11.75bn
Rockwell Automation	United States	\$6.7bn	€5.5bn
Siemens AG	Germany	€86.85bn	€86.85bn

*Table 2: overview of sample from Danfoss' industry with revenue 2019 as indication of size*

These firms compete with Danfoss across its business segments but also beyond. For instance, Siemens and Bosch also compete in other markets such as home appliances. However, these are not separated in their annual reports and thus this is something we should account for when interpreting results.

Second, we also needed to cross-check with country effects as the results from the industry comparison could potentially be a result of Danfoss being a Danish firm. For this purpose, I sampled nine firms from Denmark that are all multinational manufactures (see table 3).

<b>Firm</b>	<b>Industry</b>	<b>Revenue 2019 (DKK - €)</b>	
Arla Foods a/s	Dairy	78.8bn DKK	€10.6bn
Chr. Hansen A/S	Biotechnology	7.4bn DKK	€1bn
Demant A/S	Hearing aids and audiometric equipment	14.9bn DKK	€2bn
GN Store Nord A/S	Hearing aids and headsets	12.6bn DKK	€1.69
Grundfos A/S	Industrial water pumps	27.5bn DKK	€3.7
Haldor Topsøe A/S	Catalysis and process technology	5.9bn DKK	€0.79
Novozymes A/S	Biotechnology	14.3bn DKK	€1.92
Rockwool International A/S	Insulation	20.7bn DKK	€2.8bn
Vestas Wind Systems A/S	Windmills	90bn DKK	€12.1bn

Table 3: overview of sample from Denmark with revenue 2019 as indication of size

I have attempted to maintain as comparable a sample as possible, however, I was challenged by the limited number of global engineering firms based in Denmark with publicly available information. In a very strict sampling, probably only Rockwool and Grundfos would be suitable firms as they have similar customers and markets that rely on similar engineering capabilities to Danfoss.

For this reason, I decided to conduct a tiered analysis. Firstly, I focused only on Danfoss, Grundfos, and Rockwool as Tier 1 (T1), and then on the full sample as Tier 2 (T2). Though the sample is smaller for T1, it provides a more accurate insight into industries that are similar to Danfoss' and how they were affected by the crises (GFC and COVID).

### *Variables*

Next, we needed to choose a set of financial variables to investigate. Financial literature has employed many metrics, but especially accounting measures such as return on assets (ROA), return on equity (ROE), and return on sales (ROS) have been commonly used (Gallego-Álvarez, García-Sánchez, & da Silva Vieira, 2014; Hart & Ahuja, 1996; Kotabe, Srinivasan, & Aulakh, 2002; Nakao, Amano, Matsumura, Genba, & Nakano, 2007; Wagner, Van Phu, Azomahou, & Wehrmeyer, 2002). For this reason, I also employed ROA and ROE, while I sampled data on EBITDA margin and EBIT margin as proxies for ROS, which should provide an objective view on profitability (Gallego-Álvarez et al., 2014). For the purpose of a thorough investigation, I also added return on capital, revenue growth, and gross margin.

I sampled all data from the database Capital IQ.

<b>Financial variable</b>	<b>Definition</b>
EBIT margin	EBIT / total revenue
EBITDA margin	EBITDA / total revenue
Gross margin	Gross profit / total revenue
Revenue growth	$(\text{Revenue}_t - \text{revenue}_{t-1}) / \text{revenue}_{t-1}$
Return on assets (ROA)	EBIT x (1-tax rate) / average total assets
Return on capital (ROC)	EBIT x (1-tax rate) / average total capital
Return on equity (ROE)	EBIT x (1-tax rate) / average total equity

Table 4: overview of financial variables

### Application

First, I looked at Danfoss’ development over time. Looking at the seven metrics from 2000 to 2020, I attempt to uncover if the company was financially better off during the COVID crisis. More specifically, I look at Danfoss in four different periods (see figure 6): 1) before the GFC, 2) during the GFC, 3) between the crises, and 4) during COVID. Allow me to justify them in reverse sequence. Period 4 was given as 2020 is the only full year we have data on so far that was fully impacted by the COVID-crisis. For period 3, I chose the years 2010-2019 the capture the full effect of the C&C strategy as it began in 2010. Period 2 was defined as 2009 because this was the year where Danfoss was most significantly impacted. Period 1 was selected to have a comparable number of years with period 3 while also having the available data.

Second, we consider an industry context in the same four periods by including the mentioned competitors.

Lastly, the analysis is then replicated for the Danish sample in tier one and two to check for country effects.

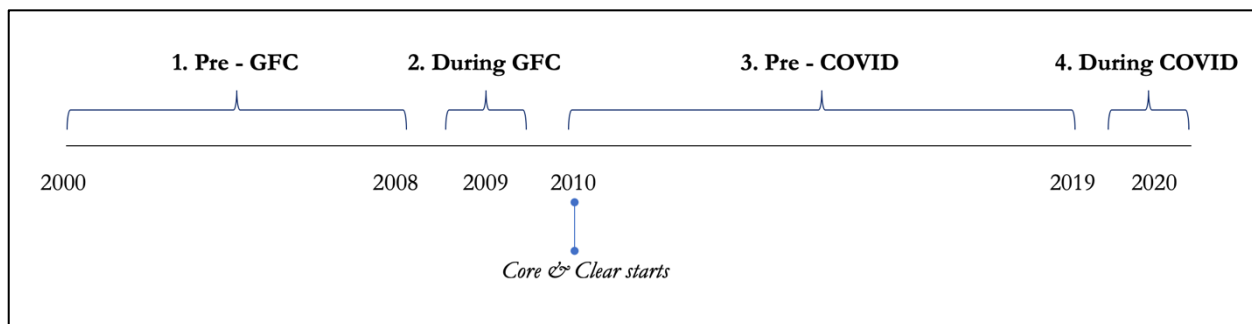


Figure 6: four stages of my financial comparison

### Semi-structured interviewing of Danfoss employees

This method was employed to uncover if the C&C strategy improved Danfoss' DC. For this purpose, I take a point of departure in Barreto's definition of the term (Barreto, 2010, p. 271):

*A dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.*

My interviews with Danfoss employees have therefore been constructed to illuminate four elements:

- i) Did the C&C strategy increase the company's propensity to sense opportunities and threats?
- ii) Did the C&C strategy increase the company's propensity to make timely decisions?
- iii) Did the C&C strategy increase the company's propensity to make market-oriented decisions?
- iv) Did the C&C strategy increase the company's propensity to change its resource base?

I utilized a combination of Likert-scales and open questions as the semi-structured approach allows for (Bryman, 2014). Through the Likert-scales I was able to quantify the Danfoss employees' perception of the company's propensities. Meanwhile, the open questions allowed me to understand, which processes, initiatives, conditions, etc. justified their ratings, plus the added benefit of verifying the chosen rating. The reader can find the full interview guide in appendix 1.

### *Sampling of Danfoss employees*

To uncover Danfoss' DC as a result of C&C, I sampled employees with the following criteria:

- Have extensive knowledge of the C&C strategy
- Be in leadership positions to grasp the full scale of impact of both crises and C&C
- Have been with Danfoss for at least the period 2007-present to be able to compare the impact of both crises

Table 5 provides an overview of the sampled interviewees from Danfoss. Five of six interviewees in my sample met both criteria, but strategy director with the Power Solutions segment, Jonathan Holloway, did not meet the tenure criteria.

<b>Name</b>	<b>Title</b>	<b>Tenure</b>
Lars Tveen	President of Developing Regions	1990-present
Troels Petersen	SVP of Group M&A	2001-present
Chintan Kharche	Head of System Controls & Industrial Refrigeration	2007-present
Niels Behrensen	CFO Danfoss Climate Solutions	2001-present
Jonathan Holloway	Strategy Director, Danfoss Power Solutions	2009-present
Bjarne Schultz	Head of strategy, Climate solutions	1997-present

Table 5: sample for interviews with Danfoss leadership

However, his answers are maintained in the research for two reasons. First, his answers correspond very accurately to that of his peers. Secondly, he evaluated his confidence in his answers as 5/5, which he justified through extensive experience with the changes Danfoss conducted.

#### Semi-structured interviewing of external business professionals

With inspiration from Barreto's (2010, p. 274) advice for future research, I decided to include third parties to "mitigate potential bias in the responses from [the focal firm's managers]". Naturally, these external experts would never have the same insight into the C&C strategy and impact of it to the same extent as Danfoss' employees. Therefore, this interview guide is not structured based on an academic approach but rather a practical one. I structured the interview into two sections. First, I asked questions about generic characteristics of organizations during crises, and second, I asked specifically about C&C after a brief explanation of what the C&C strategy was. Thus, the interviewee would be unbiased in the assessment of successful crisis performance before knowing what Danfoss actually did.

These interviews served an important complementary purpose to the research. If the concepts of the C&C strategy resonated with outside experts as building resilience, it would increase reliability if Danfoss' employees believe it helped as well. In other words, this triangulation can mitigate the potential bias of the Danfoss employees being too emotionally attached to the actions they helped implement. The full interview guide can be found in appendix 2.

*Sampling of business professionals*

This second sample of professionals consists of industry experts from especially consulting but also includes a member of CLSBE faculty. Table 6 shows an overview of the interviewees. The industry experts were sampled through my network based on the following criteria:

- i) They must have experience with the strategy function of a multinational firm
- ii) They must have experience with a multinational company during the GFC or the COVID-Crisis

As is evident from the sample, they all met these criteria and were able to competently discuss the impact of a crisis on a multinational firm. The most significant compromise is the industry experience relevant to Danfoss, which we need to keep in mind when interpreting results.

Name	Current title	Company	Criteria	
			i)	ii)
André Pinho	Innovation Officer	Católica Lisbon School of Business and Economics	Yes	Yes
Bernardo Domingos	Engagement Manager	McKinsey & Co.	Yes	Yes
Elisabeth Neurauter	Consultant	Boston Consulting Group	Yes	Yes
Fabian Baltheiser	Management Consultant	Implement Consulting Group	Yes	Yes
Theo Hellung-Larsen	Management Consultant	Implement Consulting Group	Yes	Yes
Wander Hoolboom	Consultant	Bain & Company	Yes	YES

*Table 6: sample for interviews (strategy experts)*

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Chapter 4 explained how I conducted the research. Next, Chapter 5 will finally reveal what insights they generated.

## Chapter 5. Moment of truth: did Core & Clear work?

Chapter 5 is structured by the methods I applied. First, I present the findings from my quantitative studies, followed by the findings from my two interview samples.

### Quantitative findings

My work with descriptive statistics granted three key findings.

#### 1. Danfoss during GFC compared to the COVID-crisis

Looking at Danfoss only, we see that the company improved its financial metrics across the board (table 7). Especially, EBIT margin, ROA, ROC, and ROE, went from negative or almost negative to double-digit positive numbers (except for ROA at +6.9 percent) in 2020.

Moreover, Danfoss increased the average performance in six of the metrics in the pre-crisis periods (revenue growth as the only exception). In these “normal” times without a crisis, Danfoss improved by doubling several of the variables. E.g., EBIT margin went from an average of 4.9 percent in the years before the GFC to an average of 11% in the pre-COVID years – which was also the case for ROA, ROC, and ROE.

Variables	Mean 2000-08	2009 (GFC)	Mean 2010-19	2020 (COVID)	Improvement between GFC and COVID
		-			
Revenue growth	7.5%	12.2%	7.2%	-7.3%	4.9 points = 40.2%
Gross margin	29.7%	21.8%	33.1%	34.0%	12.2 points = 56.0%
EBITDA margin	9.7%	8.2%	15.5%	16.9%	8.7 points = 106.1%
EBIT margin	4.9%	0.5%	11.0%	11.8%	11.3 points = 2260.0%
ROA	3.7%	0.2%	7.6%	6.9%	6.7 points = 2762.5%
ROC	5.3%	0.3%	11.5%	10.1%	9.8 points = 2801.6%
ROE	8.0%	-7.0%	18.3%	14.2%	21.2 points = 303.3%

Table 7: financial variables for Danfoss

In summary, considering both crisis- and normal times it seems C&C made something work for the company. However, we could be observing other effects. The two crises have vastly different origins, impacts in society, and government responses. Therefore, as a next step, I add a comparison of Danfoss competitors to check for industry effects.

## 2. Danfoss comparison of GFC and COVID relative to its industry

Danfoss appears to have improved relative to the industry (see tables 8, 9, 10, and 11). Gross margin, EBITDA margin, ROA, and ROC sends a clear message in particular. Here, Danfoss went from being under the market average in both pre and during crisis years to being over the average. Danfoss also improved EBIT margin from being under industry average in the crisis year of 2008 to be over market average in 2020, while pre-crisis periods were relatively improved though it stayed under the industry average.

In revenue growth, however, Danfoss stayed above market average in pre-crisis years and also expanded its lead from being 34.3 percent over the industry average to growing more than double the average. However, in 2009, Danfoss was over the average by 15.3 percent and was under by 13.6 percent in 2020.

In summary, Danfoss improved its performance in the pre-crisis years across all variables, while during the crisis was improved in all metrics except revenue growth.

Revenue growth

Firm	Mean 2000-08	2009	Mean 2010-19	2020
ABB	+ 4.9%	- 8.9%	- 0.4%	- 6.6%
Bosch	+ 5.6%	- 15.4%	+ 8.3%	- 8.0%
Donaldson	+ 10.2%	- 16.3%	+ 4.6%	- 9.2%
Emerson	+ 6.1%	- 15.4%	- 0.1%	- 8.6%
Honeywell	+ 5.1%	- 18.1%	+ 2.3%	11.1%
Mitsubishi Electric	+ 1.0%	- 9.3%	+ 2.2%	- 1.3%
Parker Hannifin	+ 10.5%	- 15.1%	+ 3.8%	- 4.4%
Rockwell	+ 2.6%	- 24.0%	+ 4.8%	- 5.5%
Siemens	+ 2.3%	- 9.4%	- 1.2%	- 2.3%
Danfoss	+ 7.5%	- 12.2%	+ 7.2%	- 7.3%
<b>Market Average</b>	<b>+ 5.6%</b>	<b>-</b>	<b>+ 3.2%</b>	<b>- 6.4%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>OVER</b>	<b>OVER</b>	<b>OVER</b>	<b>UNDER</b>
<i>... by</i>	34.3%	15.3%	127.3%	13.6%

Gross margin

Firm	Mean 2000-08	2009	Mean 2010-19	2020
ABB	26.6%	30.3%	30.1%	30.7%
Bosch	41.4%	27.9%	33.8%	31.5%
Donaldson	31.7%	32.1%	34.7%	33.8%
Emerson	35.8%	37.6%	41.7%	41.9%
Honeywell	22.5%	22.3%	28.1%	32.1%
Mitsubishi Electric	25.4%	26.5%	29.1%	28.3%
Parker Hannifin	20.6%	21.0%	23.9%	25.8%
Rockwell	36.6%	36.7%	41.6%	41.0%
Siemens	27.8%	27.3%	30.0%	35.3%
Danfoss	29.7%	21.8%	33.1%	34.0%
<b>Market Average</b>	<b>29.8%</b>	<b>28.4%</b>	<b>32.6%</b>	<b>33.4%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-0.4%	23.1%	1.4%	1.7%

Table 8: revenue growth and gross margin for industry sample.

**EBITDA margin**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
ABB	10.2%	14.8%	12.9%	10.5%
Bosch	10.4%	4.3%	10.4%	7.8%
Donaldson	13.6%	12.8%	16.5%	16.7%
Emerson	18.9%	18.6%	20.5%	21.3%
Honeywell	12.5%	11.1%	17.4%	23.5%
Mitsubishi Electric	8.2%	8.5%	9.5%	10.5%
Parker H	13.2%	12.0%	14.8%	18.5%
Rockwell	16.4%	12.0%	19.3%	19.6%
Siemens	8.3%	12.0%	12.1%	12.3%
Danfoss	9.7%	8.2%	15.5%	16.9%
<b>Market Average</b>	<b>12.1%</b>	<b>11.4%</b>	<b>14.9%</b>	<b>15.7%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-20%	-28%	4%	7%

**EBIT margin**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
ABB	7.2%	13.1%	10.1%	7.2%
Bosch	4.2%	-2.4%	5.4%	2.3%
Donaldson	10.7%	9.6%	13.6%	13.3%
Emerson	15.3%	15.0%	17.1%	17.0%
Honeywell	9.5%	7.9%	14.8%	20.4%
Mitsubishi Electric	3.7%	4.5%	6.0%	5.8%
Parker H	9.6%	8.6%	12.0%	14.5%
Rockwell	12.4%	9.3%	17.1%	17.1%
Siemens	3.9%	8.6%	8.7%	8.0%
Danfoss	4.9%	0.5%	11.0%	11.8%
<b>Market Average</b>	<b>8.1%</b>	<b>7.5%</b>	<b>11.6%</b>	<b>11.7%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>
<i>... by</i>	-40%	-93%	-5%	1%

Table 9: EBITDA margin and EBIT margin for industry sample.

**Return on assets**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
ABB	4.2%	7.7%	5.0%	2.7%
Bosch	2.8%	-1.2%	3.1%	1.2%
Donaldson	10.3%	7.8%	11.5%	9.8%
Emerson	10.0%	9.2%	9.2%	8.2%
Honeywell	5.6%	4.1%	7.3%	6.7%
Mitsubishi Electric	2.5%	3.0%	4.0%	3.7%
Parker H	7.3%	5.5%	7.5%	6.7%
Rockwell	7.9%	5.6%	11.1%	10.1%
Siemens	2.0%	4.0%	3.5%	2.1%
Danfoss	3.7%	0.2%	7.6%	6.9%
<b>Market Average</b>	<b>5.6%</b>	<b>4.6%</b>	<b>7.0%</b>	<b>5.8%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-33.7%	-94.8%	8.9%	18.3%

**Return on capital**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
ABB	10.5%	16.8%	9.5%	5.0%
Bosch	5.7%	-2.2%	5.6%	2.2%
Donaldson	15.5%	11.0%	15.9%	13.2%
Emerson	14.5%	13.9%	13.7%	11.7%
Honeywell	10.4%	9.2%	13.0%	10.9%
Mitsubishi Electric	5.1%	6.4%	6.9%	5.7%
Parker H	10.7%	7.9%	11.3%	8.9%
Rockwell	13.2%	10.2%	20.2%	21.2%
Siemens	4.2%	8.3%	6.9%	3.3%
Danfoss	5.3%	0.3%	11.5%	10.1%
<b>Market Average</b>	<b>9.5%</b>	<b>8.2%</b>	<b>11.4%</b>	<b>9.2%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-44.4%	-	95.7%	10.0%

Table 10: Return on assets and return on capital for industry sample.

**Return on equity**

<b>Firm</b>	<b>Mean 00-08</b>	<b>2009</b>	<b>Mean 10-19</b>	<b>2020</b>
ABB	16.6%	23.8%	13.7%	2.3%
Bosch	10.3%	-5.3%	8.8%	1.8%
Donaldson	24.0%	18.5%	25.6%	27.0%
Emerson	20.6%	19.6%	22.7%	23.8%
Honeywell	12.2%	18.8%	24.4%	26.7%
Mitsubishi Electric	6.9%	1.6%	10.0%	9.2%
Parker H	14.2%	10.6%	18.9%	20.0%
Rockwell	21.2%	14.5%	37.9%	116.9% <sup>11</sup>
Siemens	13.1%	9.3%	15.3%	9.4%
Danfoss GROUP	8.0%	-7.0%	18.3%	14.2%
<b>Market Average</b>	<b>14.7%</b>	<b>10.4%</b>	<b>19.6%</b>	<b>25.1%</b>
<i>Danfoss</i>				
<i>Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>
<i>... by</i>	<b>-45.7%</b>	<b>-167.1%</b>	<b>-6.7%</b>	<b>-43.4%</b>

Table 11: Return on equity for industry sample

Overall, this appears to tell the story of an organization, which improved significantly. However, as Danfoss is the only company in this sample that is based in Denmark, we need to ensure that we are not seeing the results of country-specific factors.

**3. Danfoss comparison of GFC and COVID relative to comparable Danish firms**

The Danish sample tells a similar story (see tables 12, 13, 14, and 15). Let us start with T1. For this group, Danfoss improved its relative performance in both pre and during crisis periods for all metrics except revenue growth. For revenue growth, Danfoss did improve from under to over the market average in pre-crisis years, however, the company saw a decline from being 13.9 percent above T1 average to 129.3 percent under. The starkness of this difference is mainly caused by the firm, Haldor Topsøe, which had a positive revenue growth in 2020, without which Danfoss would “only” have been around 30 percent under the T1 average.

<sup>11</sup> Rockwell’s ROE for 2020 was excluded from 2020 market average due to being a significant outlier.

In T2, we find the same conclusions with one exception. Average gross margin worsened in the 2010-2019 pre-crisis years compared to 2000-2008, however, it was merely a decrease from 28.6% to 28.5%.

All things considered, Danfoss improved even compared to other Danish firms. In pre-crisis years, Danfoss improved all variables for both T1 and T2. Meanwhile during crisis performance was improved in all but revenue growth for T1 and all but revenue growth and gross margin for T2. This indicates that Danfoss reaped no significant benefits from its Danish base.

Revenue growth

Firm	Mean 2000-08	2009	Mean 2010-19	2020
Arla (T2)	+ 9.4%	- 6.5%	+ 5.7%	+ 1.1%
Chr. Hansen (T2)	+ 5.9%	+ 7.2%	+ 6.6%	+ 3.5%
Demant (T2)	+ 13.4%	+ 6.1%	+ 10.2%	- 3.2%
GN Store Nord (T2)	+ 5.6%	- 15.9%	+ 10.3%	+ 7.0%
Grundfos (T1,2)	+ 10.0%	- 10.3%	+ 5.0%	- 4.3%
Haldor Topsøe (T1,2)		- 15.6%	+ 3.7%	+ 4.5%
Novozymes (T2)	+ 6.9%	+ 3.7%	+ 5.6%	- 2.5%
Rockwool (T1,2)	+ 7.5%	- 18.6%	+ 6.2%	- 5.6%
Vestas (T2)	+ 29.4%	- 15.8%	+ 10.4%	+ 22.0%
Danfoss (T1,2)	+ 7.5%	- 12.2%	+ 7.2%	- 7.3%
<b>T2 mean</b>	<b>10.6%</b>	<b>-7.8%</b>	<b>7.1%</b>	<b>1.5%</b>
Danfoss				
Over/Under...	UNDER	UNDER	OVER	UNDER
... by	-29.5%	-56.5%	0.9%	-583%
<b>T1 mean</b>	<b>8%</b>	<b>-14%</b>	<b>6%</b>	<b>-3%</b>
Danfoss				
Over/Under...	UNDER	OVER	OVER	UNDER
... by	-10.1%	13.9%	29.7%	-129.3%

Gross margin

Firm	Mean 2000-08	2009	Mean 2010-19	2020
Arla (T2)	20.3%	19.9%	22.0%	22.0%
Chr. Hansen (T2)	45.4%	47.4%	53.0%	60.2%
Demant (T2)	66.9%	70.8%	74.1%	71.5%
GN Store Nord (T2)	47.9%	54.2%	60.7%	54.3%
Grundfos (T1,2)	34.3%	36.5%	38.3%	38.8%
Haldor Topsøe (T1,2)	34.4%	39.3%	44.3%	44.3%
Novozymes (T2)	53.3%	55.6%	57.3%	56.0%
Rockwool (T1,2)	69.6%	65.8%	64.4%	67.5%
Vestas (T2)	13.4%	16.5%	16.1%	10.5%
Danfoss (T1,2)	29.7%	21.8%	33.1%	34.0%
<b>T2 mean</b>	<b>41.5%</b>	<b>42.8%</b>	<b>46.3%</b>	<b>45.9%</b>
Danfoss				
Over/Under...	UNDER	UNDER	UNDER	UNDER
... by	-28.5%	-49.0%	-28.6%	-25.9%
<b>T1 mean</b>	<b>42%</b>	<b>41%</b>	<b>45%</b>	<b>46%</b>
Danfoss				
Over/Under...	UNDER	UNDER	UNDER	UNDER
... by	-29.3%	-46.6%	-26.6%	-26.3%

Table 12: Revenue growth and gross margin for Danish sample

**EBITDA margin**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
Arla (T2)	6.6%	7.0%	6.2%	6.9%
Chr. Hansen (T2)	26.2%	30.3%	33.4%	41.3%
Demant (T2)	25.1%	23.5%	21.3%	12.7%
GN Store Nord (T2)	9.9%	3.2%	18.4%	16.0%
Grundfos (T1,2)	14.9%	12.4%	14.2%	14.7%
Haldor Topsøe (T1,2)	11.8%	14.2%	16.7%	17.6%
Novozymes (T2)	25.7%	26.6%	32.6%	33.7%
Rockwool (T1,2)	15.6%	13.3%	15.8%	18.9%
Vestas (T2)	8.2%	7.9%	9.9%	7.3%
Danfoss (T1,2)	9.7%	8.2%	15.5%	16.9%
<b>T2 mean Danfoss</b>	<b>15.4%</b>	<b>14.7%</b>	<b>18.4%</b>	<b>18.6%</b>
<b>Over/Under...</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>
<b>... by</b>	<b>-36.7%</b>	<b>-44.0%</b>	<b>-15.6%</b>	<b>-9.1%</b>
<b>T1 mean Danfoss</b>	<b>13.0%</b>	<b>12.0%</b>	<b>15.6%</b>	<b>17.0%</b>
<b>Over/Under...</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>
<b>... by</b>	<b>-25.1%</b>	<b>-31.8%</b>	<b>-0.3%</b>	<b>-0.7%</b>

**EBIT margin**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
Arla (T2)	3.1%	3.1%	3.2%	3.9%
Chr. Hansen (T2)	18.3%	22.4%	27.9%	34.0%
Demant (T2)	22.2%	20.2%	18.1%	8.8%
GN Store Nord (T2)	0.7%	-0.1%	15.1%	13.1%
Grundfos (T1,2)	9.0%	5.6%	8.6%	9.9%
Haldor Topsøe (T1,2)	7.2%	9.6%	12.2%	13.7%
Novozymes (T2)	17.9%	20.0%	26.0%	26.3%
Rockwool (T1,2)	8.7%	5.8%	9.3%	13.1%
Vestas (T2)	5.8%	4.9%	7.3%	5.1%
Danfoss (T1,2)	4.9%	0.5%	11.0%	11.8%
<b>T2 mean Danfoss</b>	<b>9.8%</b>	<b>9.2%</b>	<b>13.9%</b>	<b>14.0%</b>
<b>Over/Under...</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>
<b>... by</b>	<b>-50.1%</b>	<b>-94.6%</b>	<b>-20.5%</b>	<b>-15.6%</b>
<b>T1 mean Danfoss</b>	<b>7.4%</b>	<b>5.4%</b>	<b>10.3%</b>	<b>12.1%</b>
<b>Over/Under...</b>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>UNDER</b>
<b>... by</b>	<b>-34.5%</b>	<b>-90.7%</b>	<b>7.2%</b>	<b>-2.7%</b>

Table 13: EBITDA margin and EBIT margin for Danish sample

**Return on assets**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
Arla (T2)	3.5%	3.0%	3.2%	3.6%
Chr. Hansen (T2)	4.7%	5.5%	9.4%	8.4%
Demant (T2)	25.1%	16.8%	10.6%	3.7%
GN Store Nord (T2)	0.9%	0.0%	7.0%	6.6%
Grundfos (T1,2)	6.0%	3.4%	5.7%	6.4%
Haldor Topsøe (T1,2)		5.2%	6.7%	8.0%
Novozymes (T2)	8.7%	10.1%	12.4%	11.2%
Rockwool (T1,2)	7.2%	3.6%	6.5%	7.8%
Vestas (T2)	5.2%	2.4%	4.6%	2.9%
Danfoss (T1,2)	3.7%	0.2%	7.6%	6.9%
<b>T2 mean</b>	<b>7.2%</b>	<b>5.0%</b>	<b>7.4%</b>	<b>6.6%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-48.3%	-95.2%	3.0%	4.6%
<b>T1 mean</b>	<b>5.6%</b>	<b>3.1%</b>	<b>6.6%</b>	<b>7.3%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>UNDER</b>
<i>... by</i>	-33.7%	-92.3%	14.7%	-5.8%

**Return on capital**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
Arla (T2)	5.5%	4.0%	4.5%	4.9%
Chr. Hansen (T2)	5.4%	6.4%	11.6%	10.5%
Demant (T2)	37.2%	23.5%	13.7%	4.6%
GN Store Nord (T2)	1.1%	-0.1%	9.7%	9.6%
Grundfos (T1,2)	8.6%	4.7%	8.0%	8.6%
Haldor Topsøe (T1,2)		9.8%	12.4%	15.6%
Novozymes (T2)	12.1%	14.1%	16.7%	14.3%
Rockwool (T1,2)	9.8%	4.7%	8.4%	9.6%
Vestas (T2)	10.6%	6.3%	12.4%	9.3%
Danfoss (T1,2)	5.3%	0.3%	11.5%	10.1%
<b>T2 mean</b>	<b>10.6%</b>	<b>7.4%</b>	<b>10.9%</b>	<b>9.7%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>OVER</b>
<i>... by</i>	-50.2%	-95.3%	5.4%	4.3%
<b>T1 mean</b>	<b>7.9%</b>	<b>4.9%</b>	<b>10.1%</b>	<b>11.0%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>UNDER</b>
<i>... by</i>	-33.2%	-92.8%	14.0%	-7.9%

Table 14: Return on assets and return on capital for Danish sample

**Return on equity**

<b>Firm</b>	<b>Mean 2000-08</b>	<b>2009</b>	<b>Mean 2010-19</b>	<b>2020</b>
Arla (T2)	14.0%	11.9%	15.5%	13.7%
Chr. Hansen (T2)	0.3%	-14.6%	22.7%	27.4%
Demant (T2)	151.7%	86.7%	29.4%	14.2%
GN Store Nord (T2)	-11.1%	-1.6%	18.8%	25.3%
Grundfos (T1,2)	11.3%	6.2%	10.8%	11.1%
Haldor Topsøe (T1,2)		31.3%	29.5%	22.4%
Novozymes (T2)	20.3%	23.1%	24.5%	24.9%
Rockwool (T1,2)	11.2%	4.3%	10.1%	11.9%
Vestas (T2)	19.8%	5.6%	9.8%	19.2%
Danfoss (T1,2)	8.0%	-7.0%	18.3%	14.2%
<b>T2 mean</b>	<b>25.1%</b>	<b>14.6%</b>	<b>18.9%</b>	<b>18.4%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>	<b>UNDER</b>
<i>... by</i>	-68.1%	-148.0%	-3.6%	-22.8%
<b>T1 mean</b>	<b>10.2%</b>	<b>8.7%</b>	<b>17.1%</b>	<b>14.9%</b>
<i>Danfoss Over/Under...</i>	<b>UNDER</b>	<b>UNDER</b>	<b>OVER</b>	<b>UNDER</b>
<i>... by</i>	-21.4%	-180.4%	6.5%	-4.6%

Table 15: Return on equity for Danish sample

**Key takeaways**

The descriptive statistics tell a story of a company that greatly improved its performance relative to both its industry and country. Efficiency and profitability variables were improved in both pre and during crisis, while revenue growth was improved pre-crisis but worsened during times of crisis. This could mean that Danfoss lost market share while improving efficiency and profitability during the COVID-crisis.

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The quantitative findings indicate a correlation between the C&C strategy and an improvement in efficiency and profitability. Next step is to learn if there could be causal effects at play. To achieve that the next section will elaborate on the findings from the qualitative studies of Danfoss' employees and external experts.

## Qualitative findings

The findings from the semi-structured interviewing will be presented based on samples. First, the findings from Danfoss' employees, and secondly, from outside experts.

### 1. Assessment of Danfoss' dynamic capabilities<sup>12</sup>

Based on the perceptions of the interviewed Danfoss staff, it seems the company's DC was greatly improved as a result of the C&C strategy. The following presents the five key findings from the Danfoss interviews.

Firstly, all interviewees agreed that Danfoss improved all four propensities of Barreto's (2010) definition of DC. This led to the average scores displayed in figure 7. It should be underpinned here that I do not attempt to assess Danfoss absolute level of DC. Instead, I attempt to quantify if the company improved them, which would support the finding that C&C is correlated with the improved financial performance observed in the quantitative section. Thus, the reader should not interpret these findings as Danfoss has *good* DC but rather that the company improved them as a result of C&C.

Secondly, to validate the ratings of Danfoss DC, the interviewees were asked to elaborate on the initiatives from C&C that caused it. This led to the initiatives and their implications for Danfoss' DC displayed in appendix 3<sup>13</sup>. Here, I have only kept initiatives that were mentioned by at least two interviewees to ensure reliability. I found that all four pillars of the C&C strategy had implications for Danfoss' DC. This supports the assertion that the strategy improved Danfoss' DC from several angles making a complete rejection of H<sub>2</sub> less likely. Moreover, initiatives under the Customer & Innovation pillar were the most mentioned, and it was the only pillar represented in all four propensities.

Thirdly, the interviewee's perceptions are well aligned with the literature on DC. In terms of sensing, Teece (2007, p. 1322) already highlighted the need for probing customers about needs and technological opportunities, which the Customer & Innovation initiatives did. Eisenhardt and

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<sup>12</sup> All transcripts can be provided upon request.

<sup>13</sup> All initiatives mentioned in the Danfoss interviews can be found in appendix 3.

Martin (2000) further underpinned the importance of real-time information as a tool to sense market changes fast, which e.g., the Free & Agile pillar implemented through centralized KPIs.

In 1997, Teece also emphasized the role of coordinating routines as a source of differentiation by firms, e.g., Danfoss new innovation processes. Changing to a demand-driven innovation structure with customers at the center has enabled Danfoss at ideal times. E.g. Danfoss investment in Leanheat, which was already a proven business model with growth potential at the time of acquisition based on customers' demand for digital solutions in residential heat control.

The increased focus on customers also seemed to increase Danfoss' market orientation. This is well-aligned with Narver and Slater's (1990) finding that the highest level of market orientation was correlated to the highest level of profitability, as we found earlier that the profitability metrics especially were improved after C&C. Similar findings were obtained by Menguc and Auh (2006), Priem (2007) and also highlighted by Helfat et al. (2007) further supporting the findings here.

Several initiatives also fit previous research when it comes to reconfiguring the resource base. New cross-functional teams that include managers and leadership in Danfoss is likely a good example of Adner and Helfat's (2003) *dynamic managerial capabilities* through which the company changes its resource base. For instance, the shift made to digital customer interactions during the pandemic was driven by leadership in a top-down fashion company-wide and became a strong competence for the company.

Finally, all interviewees stated that Danfoss had improved its ability to adapt to opportunities as well as threats, and moreover, they all concluded that C&C had made the company better off during the COVID-crisis. All interviewees were asked to consider, to which extent Danfoss improved ability to handle the COVID compared to the GFC was a function of C&C. Here, the interviewees had the chance to take other elements into account such as global macrotrends, the different nature of the crisis, etc. As presented by table 16, all interviewees attributed much credit to C&C with an average score of 6.3 out of 7.

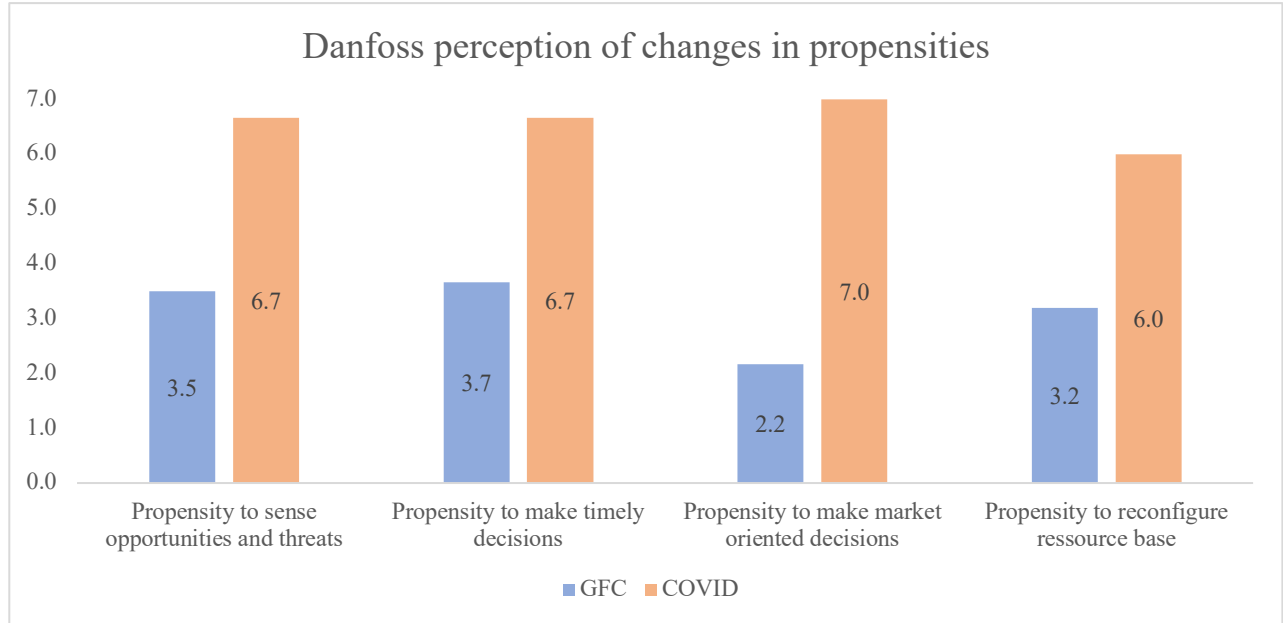


Figure 7: average scores of Danfoss’ dynamic capabilities by its employees

**To which extent was Danfoss’ improved ability to handle the COVID-crisis compared to the GFC because of C&C?**

**Interviewee**

(1: Not at all, 7: only because of C&C)

Bjarne Schultz	6
Chintan Kharche	7
Jonathan Holloway	5
Lars Tveen	6
Niels Behrensen	7
Troels Petersen	7
<i>Average</i>	<i>6.3</i>

Table 16: C&C's influence on Danfoss' ability to handle the COVID-crisis

In summary, in Danfoss’ employees’ perception DC were improved – especially propensity to make market-oriented decisions. This was backed by congruence between Danfoss’ initiatives with the literature on the topic, supporting the assertion that could be a causal link between C&C and Danfoss’ DC. Thus, we cannot reject H<sub>2</sub> at this point.

## 2. Outside experts' perspective on Core & Clear<sup>14</sup>

The outside experts sampled in this research agreed that C&C had the ingredients that would have helped the company during the COVID-crisis. Three key findings summarize this conclusion.

Firstly, before having any knowledge of the C&C strategy the interviewees referred to measures that are similar to C&C when asked about characteristics of firms that do well during crises in general and during the COVID-crisis<sup>15</sup>. The interviewees frequently mentioned initiatives that were a part of the Free & Agile pillar such as reducing debt levels and securing cash reserves. Another prominent initiative of successful firms is ensuring effective communication across the organization. This was strongly aligned with the Passion & Performance pillar which broke down the silo structure and created better cross functional and geographical communication in Danfoss.

In sum, without knowing anything about C&C, the experts indicated that the changes made would have improved Danfoss crisis resilience. This, however, was a link drawn by me as the researcher, so next, I needed to confirm with the experts' assessment.

Secondly, after a brief description of C&C, all interviewees confirmed that the strategy resonated with the characteristics that just mentioned about firms that perform relatively well. It was the experts' assessment that C&C matched what they had said about successful firms before knowing about it and thus supports my initial assertion.

Lastly, the experts highlighted the strengths and weaknesses of C&C based on the brief description, which substantiated their assessment that the strategy would have had a positive impact (if executed as intended). Appendix 5 provides a summary of only the elements that at least two interviewees mentioned. I found here that the strengths align well with the characteristics that were mentioned before knowledge about Danfoss. Moreover, the changes in relation to the Free & Agile pillar were the most popular with the outside experts. Free & Agile was moreover the second most mentioned pillar of changes from the Danfoss' employees as well, so there seems to be a consensus around the effectiveness of these type of measures. One weakness was mentioned

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<sup>14</sup> All transcripts can be provided upon request.

<sup>15</sup> Appendix 4 summarizes the answers that were mentioned by at least two experts.

related to over-reliance on fewer suppliers, but Strategy Director, Tian Xia, confirmed this did not materialize.

In summary, the experts from outside Danfoss agreed on a set of characteristics of relatively successful firms during a crisis, which they confirm matches the C&C strategy. They especially highlight changes related to the Free & Agile pillar, which was also a popular set of initiatives from Danfoss employees.

### **What did we learn?**

I set out to understand if C&C made Danfoss better able to tackle the COVID-crisis. To answer this, I formulated two hypotheses<sup>16</sup> to be investigated.

Based on the descriptive statistical analysis we cannot reject H<sub>1</sub>. We found that Danfoss improved all variables related to efficiency and profitability relative to the market and other Danish firms in 2020 compared to 2009 (GFC). However, in terms of revenue growth, the company performed better before C&C relatively to the market. So, based on this research I will partly accept H<sub>1</sub>.

Our interviews with Danfoss employees confirmed H<sub>2</sub>. Employees believed that all four propensities were improved after C&C, which they especially attributed to the measures related to the Customer & Innovation pillar. These were justified through specific examples which aligned with literature, which indicates these are reliable findings.

Lastly, we found from outside experts that C&C did indeed contain ingredients that would have improved the company's ability to handle the COVID-crisis compared to the GFC. This led us to a more reliable foundation for partly accepting H<sub>1</sub> and completely accepting H<sub>2</sub>.

In essence, the answer to the research question appears to be:

Yes C&C did make Danfoss better able to tackle the COVID-crisis in terms of efficiency and profitability through improvements of the company's dynamic capabilities. It is not, however, correlated with improvements in revenue growth according to this research.

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<sup>16</sup> H<sub>1</sub>: Danfoss improved financial performance in 2020 relatively to 2009; H<sub>2</sub>: The Core & Clear strategy developed stronger dynamic capabilities for Danfoss.

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This chapter presented the findings of the research. But before we accept these as a part of the literature, I must also cover some limitations that must be covered. We dive into these in the next chapter along with my suggestions for further research.

## **Chapter 6. What now? Considerations, implications, and further studies**

This chapter will briefly cover the limitations of the study with potential areas for future research.

### **Considerations and limitations**

I believe this thesis contains five factors that the reader should keep in mind when reflecting on the results.

First, a larger sample size with inferential statistics would have been ideal. Whether this is possible at all is difficult to say as the sample of multinational engineering companies in Danfoss' industry is limited. What is important to keep in mind here with this smaller sample size is that outliers can skew the results significantly, and we must be aware of a higher margin for error in this approach (Bryman, 2014).

Second, the financial analysis conducted here compares Danfoss to competitors across its segments. For instance, Danfoss mainly competes with ABB on AC converters and motion controls. Moreover, big companies such as Siemens and Bosch encompass many other industries that are also consumer-facing which is included in the financial results here. Thus, a more thorough next step could be to do the same analysis for each of Danfoss' segments and relevant competitors if the financial data could be segmented reliably.

Third, if granted more time I would have conducted additional interviews for both samples. Even though the interviewees largely agreed across the board, any academic endeavour is enhanced by a larger representative sample. In this case, I would have preferred a larger sample with more employees from each business segment in Danfoss, and external experts from similar industries to that of Danfoss.

Fourth, this study has not been able to substantiate a link between C&C changes and performance in the market in general. Doing this would mitigate the risk of observing other effects that this research did not account for<sup>17</sup>. This would ideally be done through observational studies if granted access. A more feasible approach, though, would be to analyse the initiatives communicated by the organizations themselves. By applying content analysis to annual reports for

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<sup>17</sup> For instance, M&A activity, market share, management turnover, etc.

instance, we could learn if organizations, which communicate initiatives similar to those from the C&C strategy also performed better during the COVID crisis.

Fifth, we must keep in mind that the on-going pandemic is in fact *on-going*. The worst of the current crisis might have yet to come, why the full scale of the impact and Danfoss' reactions might not have been visible yet.

### **Implications for the world of academia and further studies**

As explained previously, this thesis will find its rightful place in the literature of DC, and this section will cover what I believe is my contribution and where academia can go from here.

Firstly, this case study contributes to the discussion on the link between DC and firm performance. After the implementation of C&C, Danfoss improved its performance on all metrics except revenue growth in 2020 compared to 2009, but also in the years without crises – relative to its industry. This support scholars e.g. Teece (2007) and Zollo and Winter (2002) who posited that strong DC would lead to superior performance – in terms of profitability and efficiency at least. However, the link with competitiveness is a bit more blurred as revenue growth did not improve. This could potentially be in line with Eisenhardt and Martin's (2000, p. 1106) perspective that DC are “necessary, but not sufficient conditions for competitive advantage”. Next steps for academia here could be to substantiate why Danfoss went from above market average competitiveness in the years before COVID but under market average during 2020. This could illuminate what additional attributes competitors had or if some other variables are skewing the results.

Secondly, this thesis has shown that DC are relevant for Danfoss' industry and its environment. Danfoss experienced overlaps in the improvements of its performance and DC during both the normal pre-crisis years and the crisis year. This support the work of Eisenhardt and Martin (2000) and Zahra et. al., (2006), and Zollo and Winter (2002) that DC are also relevant in environments that is more moderately volatile – or not at all. This could be further substantiated by literature through alternative methods of investigating the Danfoss case. For instance, I would take inspiration from work such as Gilbert (2006), who employed an observation (among other data sources) in a longitude study. If granted access this could add tremendous insight into how C&C builds and develops DC inside the Danfoss organization, and how it helps the company in times of crises and without crises.

## **Chapter 7. Conclusion: was Danfoss better off with Core & Clear?**

If you ask this author, the answer is yes in terms of efficiency and profitability. Comparing Danfoss' performance in pre-crisis years (2000-2008 vs. 2010-2019) and during crises (2009 vs. 2020), the company improved six of seven financial variables with the only exception of revenue growth during the crisis years relative to its industry. Especially, the metrics for profitability was improved where the company went from being under the market average in both pre and during crisis to being above the market. These findings remained when comparing Danfoss to a sample of comparable Danish firms, confirming that the performance improvement was due to internal factors rather than country factors. Thus, I am not able to fully reject  $H_1$  but instead partly accept it in that Danfoss improved efficiency and profitability, though it lacks statistical significance due to limited sample size.

Next, we confirmed that Danfoss strengthened its DC. Through interviews with Danfoss' leadership, we found that all four propensities (sensing, timely and market-oriented decisions, and changing resource base) were significantly improved with several specific examples of initiatives and measures to support the finding. These measures were moreover in congruence with existing literature. This allowed us to confirm  $H_2$  in that the C&C strategy improved Danfoss' dynamic capabilities, which backs the assertion that the strategy did make Danfoss better able to handle the COVID-crisis.

Lastly, we triangulated the previous findings with an outside perspective from strategy experts. Without knowledge of Danfoss' strategy, they highlighted several characteristics of relatively successful firms during crisis, which matched well with the C&C strategy. When told about Danfoss' strategic changes, all interviews also confirmed a match between C&C and initiatives that enable resilience during crises.

Even though the findings here are consistent, we must keep in mind the relatively small sample size of the interviewees and the limited ability of descriptive statistics. For the former, a more reliable study would include several more interviewees across geographies, functions, and segments in Danfoss. For instance, I am missing the interviewees from the Danfoss Drives segment entirely. For the latter, we must remember that when it comes to descriptive statistics, we cannot hope to infer anything statistically significant. In a larger study, we might be able to draw

inferential statistics, however, the feasibility is still questionable given the finite number of firms in the industry.

The research conducted here has two key implications for academia. Firstly, I have contributed to the discussion about the link between dynamic capabilities and firm performance, where I have supported the link with efficiency and profitability but not the link with competitiveness (revenue growth) during crisis. Next steps for academia here would be to understand in depth why C&C had such a different impact on top-line performance compared to the bottom-line. Secondly, I have substantiated the relevance of DC in Danfoss industry and environment, which supports the perception that DC are not only relevant in hyper-volatile environments. This could be further substantiated by a continued study of Danfoss through observational and comparable studies in a longitude format.

## References

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### Peer reviewed sources

- Adner, R., & Helfat, C. E. (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*. <https://doi.org/10.1002/smj.331>
- Agresti, A., Franklin, C., & Klingenberg, B. (2018). *Statistics : The Art and Science of Learning from Data, Fourth Edition. Journal of Chemical Information and Modeling*.
- Arthurs, J. D., & Busenitz, L. W. (2006). Dynamic capabilities and venture performance: The effects of venture capitalists. *Journal of Business Venturing*.  
<https://doi.org/10.1016/j.jbusvent.2005.04.004>
- Audia, P. G., Locke, E. A., & Smith, K. G. (2000). The paradox of success: An archival and a laboratory study of strategic persistence following radical environmental change. *Academy of Management Journal*. <https://doi.org/10.2307/1556413>
- Balogun, J., & Jenkins, M. (2003). Re-conceiving change management: A knowledge-based perspective. *European Management Journal*. [https://doi.org/10.1016/S0263-2373\(03\)00019-7](https://doi.org/10.1016/S0263-2373(03)00019-7)
- Barney, J. B. (1986a). Organizational Culture: Can It Be a Source of Sustained Competitive Advantage? *Academy of Management Review*. <https://doi.org/10.5465/amr.1986.4306261>
- Barney, J. B. (1986b). Strategic Factor Markets: Expectations, Luck, and Business Strategy. *Management Science*. <https://doi.org/10.1287/mnsc.32.10.1231>
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*. <https://doi.org/10.1177/014920639101700108>
- Barreto, I. (2010). Dynamic Capabilities: A review of past research and an agenda for the future. *Journal of Management*. <https://doi.org/10.1177/0149206309350776>
- Beighton, C. (2019). *Reasoning With Qualitative Data: Using Retroduction With Transcript Data. Reasoning With Qualitative Data: Using Retroduction With Transcript Data*.  
<https://doi.org/10.4135/9781526477378>
- Belfrage, C., & Hauf, F. (2017). The Gentle Art of Retroduction: Critical Realism, Cultural Political Economy and Critical Grounded Theory. *Organization Studies*.  
<https://doi.org/10.1177/0170840616663239>
- Bourgeois, L. J., & Eisenhardt, K. M. (1988). Strategic Decision Processes in High Velocity

- Environments: Four Cases in the Microcomputer Industry. *Management Science*.  
<https://doi.org/10.1287/mnsc.34.7.816>
- Bryman, A. (2012). *Social research methods Bryman*. OXFORD University Press.  
<https://doi.org/10.1017/CBO9781107415324.004>
- Conner, K., & Prahalad, C. (2002). A resource-based theory of the firm. In C. W. Choo & N. Bontis (Eds.), *The Strategic Management of Intellectual Capital and Organizational Knowledge* (pp. 103–131). Oxford University Press.
- Conner, K. R. (1991). A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm? *Journal of Management*. <https://doi.org/10.1177/014920639101700109>
- Cool, K., & Schendel, D. (1988). Performance differences among strategic group members. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250090302>
- Curado, C., & Bontis, N. (2006). The knowledge-based view of the firm and its theoretical precursor. *International Journal of Learning and Intellectual Capital*.  
<https://doi.org/10.1504/IJLIC.2006.011747>
- D'Aveni, R. A. (1994). *Hypercompetition: Managing the dynamics of strategic maneuvering*. Free Press, New York.
- Dierickx, I., & Cool, K. (1989). Asset Stock Accumulation and Sustainability of Competitive Advantage. *Management Science*. <https://doi.org/10.1287/mnsc.35.12.1504>
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)
- Fixson, S. K. (2005). Product architecture assessment: A tool to link product, process, and supply chain design decisions. *Journal of Operations Management*.  
<https://doi.org/10.1016/j.jom.2004.08.006>
- Gallego-Álvarez, I., García-Sánchez, I. M., & da Silva Vieira, C. (2014). Climate Change and Financial Performance in Times of Crisis. *Business Strategy and the Environment*.  
<https://doi.org/10.1002/bse.1786>
- Galunic, D. C., & Eisenhardt, K. M. (2001). Architectural innovation and modular corporate forms. *Academy of Management Journal*. <https://doi.org/10.2307/3069398>
- Gilbert, C. G. (2006). Change in the presence of residual fit: Can competing frames coexist?

- Organization Science*. <https://doi.org/10.1287/orsc.1050.0160>
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250171110>
- Hambrick, D. C., & Mason, P. a. (1984). Echelons : of Reflection The Its Organization as Top a. *Management*.
- Hannan, M. T., & Freeman, J. (1977). The Population Ecology of Organizations Author ( s): Michael T . Hannan and John Freeman Published by : The University of Chicago Press Stable. *American Journal of Sociology*.
- Hannan, M. T., & Freeman, J. (1984). Structural Inertia and Organizational Change. *American Sociological Review*. <https://doi.org/10.2307/2095567>
- Hansen, G. S., & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250100502>
- Hart, S. L., & Ahuja, G. (1996). Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance. *Business Strategy and the Environment*. [https://doi.org/10.1002/\(sici\)1099-0836\(199603\)5:1<30::aid-bse38>3.0.co;2-q](https://doi.org/10.1002/(sici)1099-0836(199603)5:1<30::aid-bse38>3.0.co;2-q)
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. (2007). *Dynamic capabilities: Understanding strategic change in organizations*. London: Blackwell.
- Helfat, Constance E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*. <https://doi.org/10.1002/smj.332>
- Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. (1999). Theory and research in strategic management: Swings of a pendulum. *Journal of Management*. <https://doi.org/10.1177/014920639902500307>
- Jacobsen, R. (1988). The persistence of abnormal returns. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250090503>
- Kotabe, M., Srinivasan, S. S., & Aulakh, P. S. (2002). Multinationality and firm performance: The moderating role of r and d and marketing capabilities. *Journal of International Business Studies*. <https://doi.org/10.1057/palgrave.jibs.8491006>
- Lampel, J., & Shamsie, J. (2003). Capabilities in Motion: New Organizational Forms and the

- Reshaping of the Hollywood Movie Industry. In *Journal of Management Studies*.  
<https://doi.org/10.1046/j.1467-6486.2003.00417.x>
- Learned, E. P., Andrews, K. R., Christensen, C. R., & Guth, W. D. (1969). *Business policy : text and cases*. Irwin: Homewood, Ill.
- Lunde, N. (2015). *Det ny Danfoss* (1st ed.). Copenhagen: Gyldendal Business.
- Mason, E. S. (1949). The Current Status of the Monopoly Problem in the United States. *Harvard Law Review*. <https://doi.org/10.2307/1336466>
- Mason, E. S., Stigler, G. J., & Bain, J. S. (2005). Structure - Conduct - Performance. In *Estimating market power and strategies*.
- McGahan, A. M., & Porter, M. E. (1997). How much does industry matter, really? *Strategic Management Journal*. [https://doi.org/10.1002/\(sici\)1097-0266\(199707\)18:1+<15::aid-smj916>3.3.co;2-t](https://doi.org/10.1002/(sici)1097-0266(199707)18:1+<15::aid-smj916>3.3.co;2-t)
- Menguc, B., & Auh, S. (2006). Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. *Journal of the Academy of Marketing Science*.  
<https://doi.org/10.1177/0092070305281090>
- Moses, J. W., & Knutsen, T. L. (2012). *Ways of Knowing* (2nd ed.). London: Palgrave Macmillan.
- Nakao, Y., Amano, A., Matsumura, K., Genba, K., & Nakano, M. (2007). Relationship between environmental performance and financial performance: An empirical analysis of Japanese corporations. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.476>
- Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*. <https://doi.org/10.2307/1251757>
- Pablo, A. L., Reay, T., Dewald, J. R., & Casebeer, A. L. (2007). Identifying, enabling and managing dynamic capabilities in the public sector. *Journal of Management Studies*.  
<https://doi.org/10.1111/j.1467-6486.2006.00675.x>
- Pedersen, S. F. (2020a). Fausing går efter globalt lederskab: »Danfoss skal være førende inden for den grønne omstilling«. Retrieved March 15, 2021, from <https://finans.dk/erhverv/ECE12242655/fausing-gaar-efter-globalt-lederskab-danfoss-skal-vaere-foerende-inden-for-den-groenne-omstilling/>
- Pedersen, S. F. (2020b, November 19). Danfoss lægger milliardforretninger sammen. *Finans.Dk*. Retrieved from <https://finans.dk/erhverv/ECE12568122/danfoss-laegger->

milliardforretninger-sammen/?ctxref=ext

- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley & Sons Inc.
- Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and companies*. New York. <https://doi.org/10.1002/smj.4250020110>
- Priem, R. L. (2007). A consumer perspective on value creation. *Academy of Management Review*. <https://doi.org/10.5465/AMR.2007.23464055>
- Roos, J., & Whitehill, M. (1998). Exploring the Concept of Intellectual Capital (IC). In *Long Range Planning*. [https://doi.org/10.1016/s0024-6301\(97\)87431-6](https://doi.org/10.1016/s0024-6301(97)87431-6)
- Rosenbloom, R. S. (2000). Leadership, capabilities, and technological change: The transformation of NCR in the electronic era. *Strategic Management Journal*. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1083::AID-SMJ127>3.0.CO;2-4](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1083::AID-SMJ127>3.0.CO;2-4)
- Rumelt, R. P. (1984). Towards a Strategic Theory of the Firm. Alternative theories of the firm. *Competitive Strategic Management*.
- Rumelt, R. P. (1991). How much does industry matter? *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250120302>
- Rumelt, R. P. (2005). Theory, Strategy, and Entrepreneurship. In *Handbook of Entrepreneurship Research*. [https://doi.org/10.1007/0-387-23622-8\\_2](https://doi.org/10.1007/0-387-23622-8_2)
- Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly: Management Information Systems*. <https://doi.org/10.2307/30036530>
- Schumpeter, J. A. (1942). Capitalism and the Process of Creative Destruction. *Monopoly Power and Economic Performance*.
- Shapiro, C. (1989). The Theory of Business Strategy. *The RAND Journal of Economics*. <https://doi.org/10.2307/2555656>
- Smith, S. P., & Johnston, R. B. (2014). How critical realism clarifies validity issues in information systems theory-testing research. *Scandinavian Journal of Information Systems*.
- Sveiby, K. E. (2001). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*. <https://doi.org/10.1108/14691930110409651>
- Teece, D. J. (1976). *The Multinational Corporation and the Resource Cost of International Technology Transfer*. Ballinger Publishing Company.
- Teece, D. J. (1980). Economies of scope and the scope of the enterprise. *Journal of Economic*

- Behavior and Organization*. [https://doi.org/10.1016/0167-2681\(80\)90002-5](https://doi.org/10.1016/0167-2681(80)90002-5)
- Teece, D. J. (1982). Towards an economic theory of the multiproduct firm. *Journal of Economic Behavior and Organization*. [https://doi.org/10.1016/0167-2681\(82\)90003-8](https://doi.org/10.1016/0167-2681(82)90003-8)
- Teece, D. J. (2000). Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context. *Long Range Planning*. [https://doi.org/10.1016/S0024-6301\(99\)00117-X](https://doi.org/10.1016/S0024-6301(99)00117-X)
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*.  
<https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Theriou, N. G., Aggelidis, V., & Theriou, G. N. (2009). A theoretical framework contrasting the resource-based perspective and the knowledge-based view. *European Research Studies Journal*. <https://doi.org/10.35808/ersj/239>
- Thompson, M. (2007). Innovation in work practices: A practice perspective. *International Journal of Human Resource Management*. <https://doi.org/10.1080/09585190701393855>
- Wagner, M., Van Phu, N., Azomahou, T., & Wehrmeyer, W. (2002). The relationship between the environmental and economic performance of firms: an empirical analysis of the European paper industry. *Corporate Social Responsibility and Environmental Management*.  
<https://doi.org/10.1002/csr.22>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*.  
<https://doi.org/10.1002/smj.4250050207>
- Wiggins, R. R., & Ruefli, T. W. (2005). Schumpeter's ghost: Is hypercompetition making the best of times shorter? *Strategic Management Journal*. <https://doi.org/10.1002/smj.492>
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*.  
<https://doi.org/10.1002/smj.360>
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*.  
<https://doi.org/10.1002/smj.318>
- Yin, R. K. (1994). *Case Study Research: Design and Methods* (2nd ed.). Thousand Oaks: Sage Publications.

- Zack, M. H. (2003). Rethinking the knowledge-based organization. *MIT Sloan Management Review*.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*.  
<https://doi.org/10.1111/j.1467-6486.2006.00616.x>
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*. <https://doi.org/10.1287/orsc.13.3.339.2780>

### **Other sources**

- Danfoss. (n.d.). Mads Clausen - the founder of Danfoss. Retrieved March 15, 2021, from <https://www.danfoss.com/en/about-danfoss/company/history/mads-clausen/>
- Danfoss. (2010). *Annual Report 2009-The Danfoss Group*. Nordborg.
- Danfoss. (2011). *Annual Report 2010 - The Danfoss Group*. Nordborg.
- Danfoss. (2021). *Annual report 2020*.

## Appendix

### Appendix (1) Interview guide: Danfoss employees

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#### **(1) PROPENSITY TO SENSE CHANGES**

**1) How quickly did Danfoss sense the GFC?**

- 1: Very late
- 2: Somewhat late
- 3: More or less late
- 4: neutral
- 5: More or less early
- 6: Somewhat early
- 7: Very early

**2) How quickly did Danfoss sense the COVID-crisis?**

- 1: Very late
- 2: Somewhat late
- 3: More or less late
- 4: Neutral
- 5: More or less early
- 6: Somewhat early
- 7: Very early

**3) Did something change internally in Danfoss between to make these ratings differ, or was it mainly caused by something else?**

#### **(2) PROPENSITY TO MAKE TIMELY DECISIONS**

**a. During GFC, before Core & Clear, to what extend do you believe that Danfoss was able to make timely decisions?**

- 1: Very low
- 2: Somewhat low
- 3: More or less low
- 4: Neutral
- 5: More or less high
- 6: Somewhat high
- 7: Very high extent

**4) After Core & Clear, to what extend do you believe Danfoss is able to make timely decisions?**

- 1: Very low
- 2: Somewhat low

- 3: More or less low
- 4: Neutral
- 5: More or less high
- 6: Somewhat high
- 7: Very high extent

**5) Did something change internally in Danfoss between to make these ratings differ, or was it mainly caused by something else?**

- Were these changes a part of Core & Clear?
- What were the specific changes?

**(3) PROPENSITY TO MAKE MARKET-ORIENTED DECISIONS**

**6) To what extend did Danfoss had customers and competitors at the center of decisions before Core & Clear?**

- 1: Very low
- 2: Somewhat low
- 3: More or less low
- 4: Neutral
- 5: More or less high
- 6: Somewhat high
- 7: Very high extent

**7) To what extend does Danfoss have customers and competitors at the center of decisions now?**

- 1: Very low
- 2: Somewhat low
- 3: More or less low
- 4: Neutral
- 5: More or less high
- 6: Somewhat high
- 7: Very high extent

**8) Did something change internally in Danfoss between to make these ratings differ, or was it mainly caused by something else?**

- Were these changes a part of Core & Clear?
- What were the specific changes?

#### **(4) PROPENSITY TO CHANGE RESOURCE BASE**

**9) To which extend do you perceive that Danfoss was able to change its resource base that during GFC?**

- 1: Not at all
- 2: To a low extend
- 3: To a somewhat low extend
- 4: Neutral
- 5: To a somewhat high extend
- 6: To a high extend
- 7: Perfectly able

**10) To which extend do you perceive that Danfoss was able to do that during COVID-crisis?**

- 1: Not at all
- 2: To a low extend
- 3: To a somewhat low extend
- 4: Neutral
- 5: To a somewhat high extend**
- 6: To a high extend
- 7: Perfectly able

**11) Did something change internally in Danfoss between to make these ratings differ, or was it mainly caused by something else?**

- Were these changes a part of Core & Clear?
- What were the specific changes?

#### **(4) Grand scheme of things**

**12) All things considered, do you believe that Danfoss was better able to handle the COVID-crisis than GFC?**

**a. If so, to what extend was that because of Core & Clear?**

- 1: Low extend
- 2: Somewhat low extend
- 3: More or less low extend
- 4: Neutral/undecided
- 5: More or less high extend
- 6: Somewhat high extend
- 7: High extend

- 13) Do you think the Core & Clear changes have made you more adaptive and reactive to opportunities as well as challenges?**  
a. Please elaborate.

**(5) Last few details**

**14) How many years with Danfoss?**

**15) How confident are you in the answers you have provided?**

- 1: Not confident at all
- 2: Slightly confident
- 3: Somewhat confident
- 4: Fairly confident
- 5: Completely confident

**16) Anything I have forgotten?**

**17) Can I paraphrase you?**

**18) Anybody else that would be relevant to talk to?**

## **Appendix (2) Interview guide. Outside experts**

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**Have you worked on any projects related to challenges with the COVID-crisis or the financial crisis back in 2008?**

**Are there some generic characteristics of firms that perform relative well during a crisis?**

**Did these also apply for the COVID crisis?**

**If you were the CEO of an industrial firm like Danfoss, and you knew for a fact that a crisis like the current one would hit in 10 years, how would you prepare the company?**

### **INTRODUCE THE CORE & CLEAR STRATEGY**

**Core & Clear** is about sustained focus on the core activities within which Danfoss already holds, or is close to having, a leading global position. Danfoss must also constantly make sure to differentiate itself from the competition within its core businesses.

**Free & Agile** is about increasing the Group's flexibility and maneuverability, and thus its ability to rapidly adapt to market developments. This will be achieved through sustained optimization of the supply chain and administrative processes. Focus will be maintained on reducing debt and increasing cash flows.

**Customer & Innovation** focuses on innovation based on customer requirements. Danfoss invests in maintaining and enhancing the ability to create value for our customers through innovation and customer-differentiated products of the highest quality.

**Passion & Performance** concerns the Group's commitment and ability to implement the strategy. Focus is on communicating a clear, shared direction, defining clear goals for employees and managers alike, and investing in competence building, commitment and the ability to meet ambitious goals.

**Do these changes match any of the descriptions you mentioned before?**

**Does it sound like these changes would have impacted Danfoss' performance during COVID?**

**So, all else equal if Danfoss did not implement these changes do you believe the company would have been more negatively impacted?**

**If you were to rate from 1 – 5, how would you estimate the Core & Clear strategy's effect on Danfoss ability to handle the COVID crisis?**

**Anything that I have missed?**

**What do you think about the questions?**

**Anybody else I should talk to?**

### **Appendix (3) Danfoss employees on Core & Clear initiatives**

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On the following pages.

**Propensity to sense opportunities and threats**

<b>Initiative</b>	<b>Core &amp; Clear pillar</b>	<b>Supported by</b>	<b>Why it improved dynamic capability</b>
Standardized processes with KPIs, triggers, and scenario planning	Free & Agile	<ul style="list-style-type: none"> <li>• Chintan Kharche</li> <li>• Jonathan Holloway</li> <li>• Niels Behrensen</li> </ul>	Before Core & Clear, Danfoss’ facilities across functions and geographies would have different KPIs with little to no transparency across the organization. Now, the company has centralized KPIs, which triggers specific scenarios when they reach a certain threshold. In this way, the company can sense it companywide immediately as the impact occurs.
Closer collaboration with customers	Customer & Innovation	<ul style="list-style-type: none"> <li>• Chintan Kharche</li> <li>• Jonathan Holloway</li> <li>• Niels Behrensen</li> <li>• Bjarne Schultz</li> </ul>	Danfoss now interacts with the customs more frequently. For instance, the Power Solutions segment receives weekly reports on customer interactions, which allows Danfoss to sense almost immediately if something changes with the customers.
Aligning internal culture with common direction and procedures	Passion & Performance	<ul style="list-style-type: none"> <li>• Chintan Kharche</li> <li>• Jonathan Holloway</li> </ul>	After Core & Clear, Danfoss has become more aligned as an organization. The culture of the company has become aware of what the future holds and what the focus are. This means Danfoss is better able to sense what is an opportunity or a threat and can quickly share it through cross functional teams.
Cross functional teams and breaking down silos	Free & Agile  Passion & Performance	<ul style="list-style-type: none"> <li>• Lars Tveen</li> <li>• Niels Behrensen</li> <li>• Bjarne Schultz</li> </ul>	Before Core & Clear Danfoss’ regions and segments were largely left alone. Now, communication and teams are spanning geographies and functions, so when the first reports about COVID-19 came out from Wuhan, Danfoss HQ was informed very quickly.

## Propensity to make timely reactions

Initiative	Core & Clear pillar	Supported by	Why it improved dynamic capability
Focus on increasing cash flow from supply chain and decreasing complexity	Free & Agile	<ul style="list-style-type: none"> <li>• Chintan Kharche</li> <li>• Jonathan Holloway</li> </ul>	After Core & Clear was executed, the company are now better able to adjust to sudden peaks and decreases in demand. E.g. Danfoss was fast to scale down production during 2020, while Q1 of 2021 had record-breaking growth, which the company still managed to keep up with.
Focus on core activities and adjacent competences	Core & Clear	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Lars Tveen</li> <li>• Bjarne Schultz</li> </ul>	An important part of Core & Clear was outsourcing non-core activities. This has made Danfoss much more flexible and able to react faster. E.g. in Danfoss' factory facilities in Neumünster, a third-party is now handling all inventory management. This reduced complexity has allowed Danfoss to adjust faster to changes in demand during COVID.
Increased frequency of customer interactions	Customer & Innovation	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Niels Behrensen</li> <li>• Bjarne Schultz</li> </ul>	More frequent interactions with customers now allows the company to shorten the cycle from sensed change to reaction towards customers. For instance, was Danfoss quick to change customer conferences from physical to an online format.
Cross functional teams and breaking down silos	Passion & Performance	<ul style="list-style-type: none"> <li>• Lars Tveen</li> <li>• Niels Behrensen</li> </ul>	With the new hierarchy and standardized processes Danfoss was able to roll out changes much faster. For instance, Danfoss initiated a "Global Crisis Team" almost immediately after Danfoss representatives sensed changes in relation to COVID. This team consisted of several head of regions from across the world and several SVP functions such as global head of HR, which allowed Danfoss to roll out safety measures in a standardized way company wide.

**Propensity to make market-oriented decisions**

<b>Initiative</b>	<b>Core &amp; Clear pillar</b>	<b>Supported by</b>	<b>Why it improved dynamic capability</b>
Focus on core activities and adjacent competences	Core & Clear	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Lars Tveen</li> <li>• Bjarne Schultz</li> </ul>	<p>Let partners take over any activity that was not core to Danfoss. The propensity to act market oriented increased as the company would have internalized more activities instead of creating value for customers by using the market.</p> <p>Additionally, Danfoss was now better able to accommodate customers' number one priority: delivering on time.</p>
Increased customer interaction	Customer & Innovation	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Niels Behrensen</li> <li>• Bjarne Schultz</li> </ul>	Through tracking of customer interactions, the company is now better able to act in a value creating manner towards customers.
Focus on mega trends such as digitalization and electrification	Customer & Innovation	<ul style="list-style-type: none"> <li>• Lars Tveen</li> <li>• Jonathan Holloway</li> </ul>	Allowed Danfoss to provide the customers with the type of online and digital service they wanted after lockdowns went into effect. Danfoss' NPS even increased as a result.
Modeling and simulation functions	Customer & Innovation	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Chintan Kharche</li> </ul>	Monitor trends in specific segments allowing the company to react fast to changing opportunities in new technologies that are important for Danfoss' customers.

Propensity to change resource base

<b>Initiative</b>	<b>Core &amp; Clear pillar</b>	<b>Supported by</b>	<b>Why it improved dynamic capability</b>
Focus on increasing cash flow from supply chain	Free & Agile	<ul style="list-style-type: none"> <li>• Chintan Kharche</li> <li>• Jonathan Holloway</li> </ul>	<p>The company focused more on recruiting people with strong supply chain experience. This helped Danfoss adjust supply chain operations during the COVID- crisis and build strong competences that enabled flexible supply chain operations.</p>
Focus on core activities and adjacent competences	Core & Clear	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Lars Tveen</li> <li>• Bjarne Schultz</li> </ul>	<p>With a clearer focus, the company is now better able to invest in future capabilities as they are aligned on which direction the company is headed. For instance, a recent acquisition of the Finnish company, Leanheat, shows a move into digital solutions.</p> <p>Another example can be found in Danfoss’ facilities in Neumünster, where a third-party is now handling all inventory management. This enabled Danfoss to improve timely deliveries, which turned out to be a differentiating factor and a new core competence for the company.</p>
Modeling and simulation functions	Customer & Innovation	<ul style="list-style-type: none"> <li>• Jonathan Holloway</li> <li>• Chintan Kharche</li> <li>• Bjarne Schultz</li> </ul>	<p>Monitor trends in specific segments allowing the company to react fast to changing opportunities in new technologies and invest in future differentiating resources.</p> <p>New structures and procedures for new product development also made Danfoss better able to systematically capture new opportunities from innovation.</p>
Focus on mega trends (digitalization, electrification)	Customer & Innovation	<ul style="list-style-type: none"> <li>• Lars Tveen</li> <li>• Jonathan Holloway</li> </ul>	<p>Allowed Danfoss to shift focus to digital solutions and capture the rapid growth of the market for electrification.</p>

## **Appendix (4) Outside experts' perspective on successful firms during crises**

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On the following page.

Characteristics of firms that perform relatively well during crises.	Supported by	Match with Core & Clear
Strong dynamic capabilities that are developed before the crisis hit	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Bernardo Domingos</li> <li>• Fabian Baltheiser</li> </ul>	<p>According to internal perceptions, Danfoss improved all elements of their dynamic capabilities.</p>
Pocket money so you do not run out of cash immediately	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Elisabeth Neurauter</li> <li>• Wander Hoolboom</li> </ul>	<p>Free &amp; Agile pillar increased cash flow.</p>
Can shift operating model quickly (resource base)	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Bernardo Domingos</li> <li>• Elisabeth Neurauter</li> </ul>	<p>Focus on digitalization enabled Danfoss to change interaction with customers to online format. NPS of customer service improved after COVID hit, indicating this was effective.</p>
Management systems in place so scenarios are in place	<ul style="list-style-type: none"> <li>• Fabian Baltheiser</li> <li>• Wander Hoolboom</li> </ul>	<p>Common KPIs with triggers and scenario planning was a part of Passion &amp; Performance.</p>
Move away from silo thinking and enable horizontal and vertical communication	<ul style="list-style-type: none"> <li>• Fabian Baltheiser</li> <li>• Theo Hellung-Larsen</li> <li>• Wander Hoolboom</li> </ul>	<p>All four pillars of the strategy enabled break down of silo structure and increased cross-functional communication.</p>

## **Appendix (5) Outside experts' perspective on Core & Clear**

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On the following page.

Strengths identified after brief explanation of the Core & Clear strategy	Supported by
Focus on core activities as a part of the Core & Clear pillar.	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Bernardo Domingos</li> <li>• Elisabeth Neurauter</li> <li>• Wander Hoolboom</li> </ul>
Flexibility in supply chain as a part of the Free & Agile pillar.	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Bernardo Domingos</li> <li>• Elisabeth Neurauter</li> <li>• Fabian Baltheiser</li> </ul>
Improved internal communication as a part of the Passion & Performance and Free & Agile pillars.	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Fabian Baltheiser</li> <li>• Theo Hellung-Larsen</li> </ul>
Improve cash flow and bring down debt as a part of the Free & Agile pillar.	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Wander Hoolboom</li> </ul>

Weaknesses identified after brief explanation of the Core & Clear strategy	Supported by
Decreasing number of suppliers could mean Danfoss became too dependent on them.	<ul style="list-style-type: none"> <li>• André Pinho</li> <li>• Wander Hoolboom</li> <li>• Theo Hellung-Larsen</li> </ul>