

## Volume 5, Number 1



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#### **Letter from the Editor-in-Chief**

Over the past semester, The Economics Review at New York University has continued to garner more reach within the NYU community by captivating readers with article topics ranging from business and politics to more tangible and relatable content such as campus and community, among others. We also continue to provide an outlet for writers and editors to explore their interest in Economics outside of the classroom and to fine-tune their editorial and research skills, whilst having the opportunity to discuss any issue they'd like to with other team members.

Every member's time and energy is key to the success of this publication, and for that reason I thank the members of our team for all the effort that everyone has put in to the publication this semester. I would also like to thank Andrea Ferrell and Isa Alomran, our Co-Managing Editors of the Online Publication, who have worked tirelessly this semester to motivate and encourage our writers and editors to maintain their high-quality content for our website. Not only that, they continue to inspire writers and editors to think analytically beyond their capabilities, pushing each member to excel in whatever it is that they are doing. Additionally, I'd like to thank Abby Diette, our webmaster, who has kept our website alive these past few years. Last but not least, I'd like to express my gratitude to Rio Liu, our Managing Editor of the Printed Publication, who has spent the past semester curating and editing the Fall 2019 edition of the Printed Publication in hopes to provide an outlet for inspired writers as well as an outlet to feed economic curiosity.

I am proud to present to you the Fall 2019 edition of the Printed Publication. I hope that the pieces in this edition are intriguing and captivating and that you there is something to learn from every piece. Thank you to my predecessor, Meghna Rangan, for all the work and effort you have put in to expanding the Economics Review and to my team who I have been humbled to have worked with these past few years.

Happy Reading!

Sincerely,

Yasmine Deswandhy

#### Editorial

As a creative and passionate team of editors and writers, the Economics Review at New York University is an undergraduate organization aiming to provide New York University students with an informative, analytical, and inspirational source of economics-related articles and research papers. I would like to present to you, with great pleasure, the Editorial of the Economics Review at New York University.

The goal of the Economics Review is to encourage NYU students to conduct research and advance their career prospects by publishing their work. Our student-led editorial staff works with staff and freelance writers to produce content that will raise debate and awareness as well as improve research and writing skills among the NYU community. Every semester, we select a number of research papers written by NYU students to be published in our semi-annual print publication. We encourage students from not only economics and related majors but also any interested personnel, regardless of their school or field of study to contribute to the Review.

For the Fall 2019 Volume, the print publication committee selected four papers to present to our readers. We focus on topics relevant to "the trade and the industry" in order to capture various aspects of the turbulent global economic and political landscape over this past year. The researchers discuss issues related to the European Union's economy, corruption in developing economies, operation of the aviation industry, and structures of sovereign wealth funds. It is imperative for us to understand the complexity of our global economy, especially at such point when globalization has faced some of its greatest challenges yet.

I would like to give my special thanks to Prabhod Mudlapur, the author of the first paper and the beloved former president of the Economics Review two years ago, for his commitment and love to the Review. I would also like to thank Daniel Fridman for contributing two well-written papers. Additionally, this volume would not have been realized without the help of the Review editors: Vibha Mital, Xiang Qiao, and Elizabeth Ruehl. Last but not least, I would like to give my biggest love to Cameron Taheri, the former managing editor of the print publication and the mentor of the committee. He instructed and inspired the team throughout every stage.

We thank our readers for their genuine support and look forward to further expanding the reach of the publication.

Sincerely,

Rio Liu

Rio Liu

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# **Academic Papers**

# Why Germany Benefits From Stalled Eurozone Integration

### By Prabhod Mudlapur

#### **Abstract**

The discussion of German involvement in the affairs of the European Union is one with cause for care; several lifetimes of histories past have granted the German nation and their people an outsized role in the development of modern Europe and within that story lie battles of politics, power, and economic control. This paper seeks to analyze the benefits that Germany gains from the current state of affairs in the European Union, where these policies arose from, their effects on domestic and European policy, and where they appear to be headed.

#### 1. History

#### A. European Coal and Steel Community (ECSC)

The foundation of the project of European economic integration was laid in the wake of World War II, when the leaders of the post-war alliance sought to ward off the possibility of further strife on the continent (European Union, 2017). The 1951 Treaty of Paris established the European Coal and Steel Community (ECSC), whose members included Belgium, France (and its colony of Algeria at the time), Italy, Luxembourg, the Netherlands and West Germany (European Union, 2017). Proposed by Robert Schuman, the French Foreign Minister in 1950, the organization aimed to create a common market and pool coal and steel production to enable the economies of the devastated nations to compete on the global market, to return living conditions to pre-war standards, and to enable further cooperation within Europe (The Schuman Declaration, 2017). The ECSC created institutions that would serve as the precursors to today's European Commission, European Parliament, the Council of the European Union, and the European Court of Justice (The Schuman Declaration, 2017).

#### **B. European Economic Community (EEC)**

In 1957, the same six countries ratified the creation of the European Economic Community (EEC) through the Treaties of Rome, a coincident set of policies that served to further deepen and enlarge the scope of this pan-European economic project (UNI.LU., 2016). Under the auspices of this treaty and its decades-long cycle of amendments and integrations, Europe moved towards expanding the membership of the economic bloc (UNI.LU., 2016). In the 1970s, Ireland, Denmark, and the United Kingdom joined the community while the 80s saw expansion southwards to Spain, Greece, and Portugal (UNI.LU., 2016). After the fall of the Berlin wall, the community expanded eastwards, capturing swathes of the newly-democratic nations

created in the aftermath of the fall of the Soviet Union (UNI.LU., 2016).

While the growth of the pan-European project to more countries had the effect of bringing more citizens and more of the political machinery of Europe into the catchment area for the ECSC and the EEC, the greater transformations derived from the policies that were foundational to the Community (UNI.LU, 2016). As a result of the reduction in tariffs and customs on coal and steel, two of the major post-war exports for the European nations, trade within the Community increased dramatically (UNI.LU., 2016). As coal supplies started to dwindle, the ECSC and the EEC were able to help workers and industries transition to oil and gas, ameliorating the discontent that could have arisen as a result of perceived trade losses within the Community (UNI.LU., 2016).

#### C. Spaak Report

Based on the policies outlined in the Spaak Report (Brussels Report on the General Common Market) of 1956, the Community sought to expand the reach and scope of the customs union via simultaneous reductions in trade duties, while creating Community-wide duties that would apply to trade with third countries (Spaak Report, 1956). Additionally, the report proposed import and export controls for trade within the union, a common agricultural market, the basis for European antitrust law (competition-standard vs. the prevailing consumer welfare standard), corporate and financial legislation, restrictions on subsidies (except as tools of social policy, development or temporary aid), harmonization of legal systems, a European fund, free movement of labor and capital, and a host of other issues (Spaak Report, 1956). While these policies resonated to various extents within the European countries, there came to be a set of generally accepted principles upon which the European economic integration project would move forward (Spaak Report, 1956). A number of the policies laid out in the Spaak Report became part of the foundational basis for the economic doctrines that underpin the European Union, but the Spaak Report was especially prescient in its analysis of the potential drawbacks of such a framework. (Spaak Report, 1956) In Chapter 4 of the report, Spaak speaks to the problems of finding equilibrium in the balance of payments between the nations and proposes that the "Six States,"

- 1) Establish closer cooperation among their central banks,
- 2) Give the European Commission the right to grant safeguard clauses, and to propose mutual assistance (Spaak Report, 1956).

The report goes on to mention that in the "Final Period," a period when the common market is in effect and the process of EU integration is well underway, "A state in difficulty will be able to re-establish quotas vis-a-vis third countries only in conformity with its international obligations and after consultation with the European Commission. the Commission will present the alternatives to the other member States: either to take the necessary measures to prevent the restrictions from being applied against them, or to grant credits, to the extent that the common commercial policy does not suffice to resolve these problems," (Spaak Report, 1956). While a

blunt interpretation of the above might indicate that the report advocates for the imposition of quotas and tariffs in moments of economic turmoil, a modern day interpretation of the report's findings shows that even at the founding of the EEC and the ECSC, there was a clear recognition that the common market and the free movement of the factors of production would result in imbalances that would need corrective action, either that which could be taken by the state, or through the granting of "credit" by the European Union (Spaak Report, 1956).

This process remained relatively stagnant until the 90s, when the breakneck pace of change required by the fall of the Soviet Union, German reunification, and incoming wave of applicants for European Union membership resulted in a number of monumental policies being passed. The Maastricht Treaty came into force in November of 1993, creating the European Union. Subsequent enlargements expanded the membership to its current 28, although the United Kingdom has recently invoked Article 50 of the Treaty on European Union to commence proceedings to withdraw from the European Union.

#### D. Euro

The history of the monetary system of Europe after World War II lends itself to be divided into three distinct periods, each with their distinct characteristics that have led to the system we presently see today (MINE). In analyzing the reasons for the strength of the German economy relative to its Eurozone brethren, it is instructive to note that (West) German economic strength is not a recent phenomenon—strict "sanctions" and reparations payments were imposed on the post-war economy which masked a strong industrial base with an educated workforce that has existed to this day. ("History of the Euro").

- 1. The European currencies in the post-war period relied heavily on the Bretton Woods system, a global monetary order backed by the convertibility of the US Dollar to the substantial gold reserves of the United States ("History of the Euro"). Saddled with post-war debts, the European nations were forced to accept a system of fixed exchange rates that made the US Dollar the de facto reserve currency for most central banks, as well as the international denominator for a unit for trade (MINE). This system was maintained until 1971, when US President Nixon issued an executive order making the US Dollar inconvertible with gold—setting the stage for the next decade of managed fixed currencies.
- 2. Oil crises, war, and other shocks prevented large-scale monetary cooperation during the 70s, however, the Werner group, led by Luxemburgish Prime Minister Pierre Werner, led efforts to launch the European Monetary System ("History of the Euro"). The EMS was built on two major efforts that would lead to the development of the euro in the 90s: the European Currency Unit (ECU) and the European Exchange Rate Mechanism (EERM) ("History of the Euro"). The EMS relied on a set of bands linking the currencies of the European countries to one another, making the central banks of the various nations obligated to defend their agreed-upon currency bands using open-market purchases or sales of their respective currency reserves ("History

of the Euro"). Instead of a system of pegs between each nation that needed to be renegotiated frequently to reflect economic, financial, and market conditions, nations made one peg to the ECU, and other nations made conversions based on rate ("History of the Euro"). These rates were allowed to move relative to one another by a narrow band of +/- 2.25%, and a wider band of +/- 6% to reflect day-to-day volatility in the currencies ("History of the Euro"). While this did shepherd in a decade of relative currency stability, the strength of the German Mark resulted in the bands moving with the operations of the Bundesbank, Germany's central bank ("History of the Euro"). This resulted in strain upon the system, as strong German growth made visible weaknesses in the neighboring countries ("History of the Euro"). When these weaknesses were made apparent, speculators (traders) could make healthy profits by realizing that the countries that were close to breaching their currency bands would burn billions of dollars of currency reserves to remain within the accordion ("History of the Euro"). This system became untenable for a number of countries, and in 1992, Italy and the United Kingdom withdrew from the ERM. As a result, these currencies began to float freely on the open market ("History of the Euro"). Faced with this dilemma, the European Monetary System evolved to the ERM - II regime, where currency bands were expanded and loosened to +/- 15%, with little to no obligation to defend a band ("History of the Euro"). However, as countries moved towards eurozone membership, many chose to impose stricter bands upon themselves to demonstrate currency and fiscal stability to the eurozone members ("History of the Euro").

3. In 1994, the Maastricht Treaty provided for the creation of a common currency to be launched on 1 January, 1999 with the European Monetary Institute later becoming the European Central Bank – the sole monetary authority for the eurozone ("History of the Euro"). Higher liquidity and the immaculate interconvertibility of the single currency made adoption by financial markets swift, while concerted efforts by national governments to replace domestic tender with the euro – especially as more and more inter-country trade came to be denominated in the euro – resulted in the worst of the transition taking less than a year ("History of the Euro"). The ERM - II regime came to be seen as a "waiting room" for entry into the eurozone, with prospective members agreeing to the Copenhagen criteria (a series of guidelines on fiscal indicators) and the Mechanism for ensuring currency stability ("History of the Euro"). Over the aughts, the eurozone expanded from its initial bench of wealthy, Northern and Western European nations to encompass a majority of the European Union ("History of the Euro").

#### E. Eurozone Crisis

The eurozone crisis, studied ad nauseum in several other academic works and during our class, details a series of simultaneous events that took place during the global recession. While the United States and a number of other non-European countries were able to recover from the crisis within a period of five years, Europe faced long-lasting effects that persist to this day. Europe pursued a set of policies that

were in several ways influenced by the German government and German electorate, and resulted in a general fear and reluctance to pursue further pan-European financial projects. Arguments made later in this paper will indicate how proposed reforms were or have been derailed by actions taken by the Northern or wealthier European nations, to the detriment of individual nations, and to the Union overall.

#### 2. Benefits Accrued to Germany From the System At Present

The discussion of Germany's gains from stalled European financial integration have as much to do with decisions taken during the heyday of the ECSC and the EEC as they do with those of the crisis years. Germany has an outsize role in the proceedings of the European Union, arising from the size of its population, its history, its strategic position within Europe, and its powerful financial and industrial base.

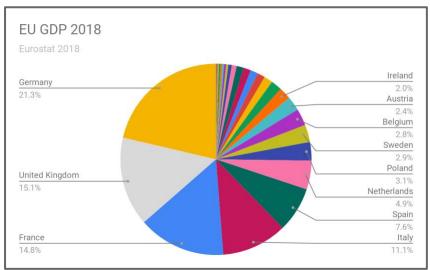


Exhibit 1

Today, Germany comprises a little more than a fifth of the EU's annual output, a proportion that is set to rise to a third when (if) the United Kingdom completed its Article 50 withdrawal from the European Union. Germany today is one of the world's largest and most technologically advanced producers of iron, steel, coal, cement, machinery, vehicles, electronics, and a number of other products. Additionally, Germany serves as one of Europe's alternate financial capitals -- a number of the Union's largest banks, not including its two national champions -- Deutsche Bank and Commerzbank, have large euro area clearing operations in the country (Nederland, Business Insider, 2018). A more instructive display of Germany's relative importance in the EU however, might be a discussion of the country's share of the Union's GDP over time (European Banking Federation, 2018).

#### EU GDP 2000-2018



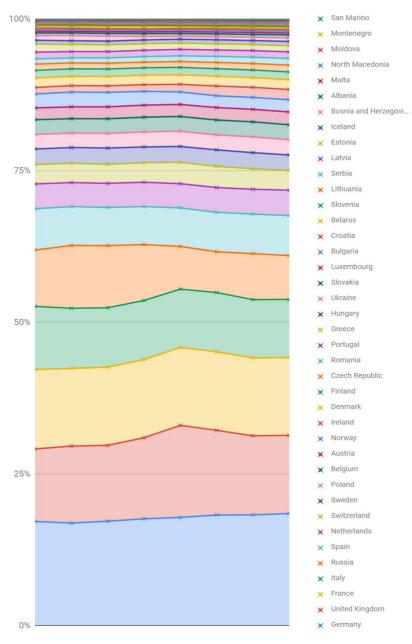


Exhibit 2

This chart displays a relatively stagnant share of EU GDP for Germany, which is shown as the base layer of the chart in light blue. What is not clearly evident from the data, however, is the fact that the 2000-2018 range included the addition of thirteen countries to the European Union, namely: Cyprus (9.99 bil. USD), Estonia (5.69 bil USD), Hungary (53.82 bil USD), Latvia (7.94 bil USD), Lithuania (11.54 bil. USD), Malta (4.30 bil. USD), Poland (171.89 bil. USD), Slovakia (29.12 bil. USD), Slovenia (20.34 bil. USD), Bulgaria (13.16 bil USD), Romania (37.44 bil. USD) and Croatia (27.77 bil. USD). While these countries were by no means the largest potential admits to the European Union, the majority of them saw healthy growth in the years following their accession. With this addition, and the sudden growth that they experienced once they entered the customs ordinarily should have resulted in a gentle decline in the proportion that Germany and other developed nations within the EU contributed.

What we see, however, is that Germany experienced a gentle increase its in relative size within the EU while the rest of these countries remained stagnant or shrunk. This gives us a result that, graphically, has two inferences. Either the other countries experienced strong growth that they did, but the effects of the global recession and financial crisis caused them to decline relative to other nations in the EU, or that Germany experienced super-impository growth that outweighed that of the rest of the Union. While it would be reductive to say that either one of those factors was the sole cause of the phenomenon observed above, it is very likely that the actual result was a combination of the two. What this would indicate is that Germany and other wealthier nations stood to receive an outsize benefit from the expanded membership, that was not adequately distributed or earned by the rest of the Union.

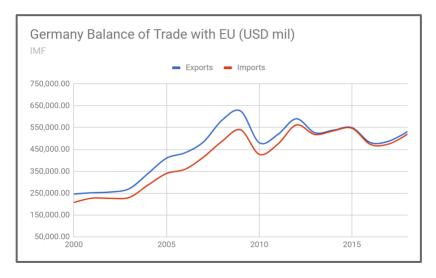


Exhibit 3

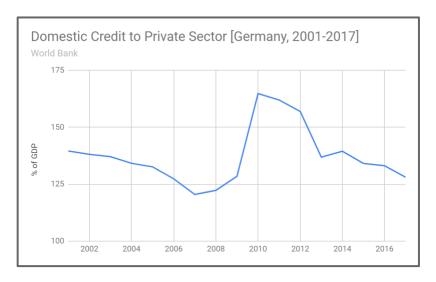
If we take a look at Germany's trade balance with the European Union over the same period, it is clear that Germany exports a considerable deal more to the rest of the EU than it imports. While this is generally a sign of a healthy economy, in the majority of similar situations, the country's balance of trade and payments would be adjusted by the forces of the market. This adjustment might take place in the form of a rise in standards of living, thereby increasing the cost of labor and resulting a balance being formed between the cost of the inputs of production (capital, labor, and land) and its export potential, as can be seen in modern China and it, or in the gradual appreciation of the currency of the exporter nation, as was seen by Japan in the years after 1971 when it began to float its currency. What is clear is that the mechanisms of the market step in to control for exuberant growth within any country.

In the case of Germany, this balance starts to break down and cause problems for the rest of the European Union. The European Union's gross savings rate over the same period we have discussed throughout this paper has hovered around 20%, while Germany's, after a mild recession in the early 2000s have saved close to 30% as a percentage of GDP. Additionally, from a high around 2000 when the EU bore the brunt of the uncertainty related to the introduction of the euro and the formation of the monetary union, German bund rates, the measure of the interest rates that the German government would have to pay to borrow on the open market, have fallen to a number infinitesimally close to zero and have remained at that level since the inception of the financial crisis. This, coupled with the free (in relation to tariffs and custom duties) exports that Germany makes to the rest of the European Union has resulted in a soft cushion that German industry and the government have benefited from. When the levers of correction that the market generally imposes on states, regions, or Unions in crisis are unable to function, we start to see abnormalities in response.

The abnormality that was made apparent during the Eurozone crisis simplistically follows as such. When countries within the EU began to experience difficulties, as the PIIGS (Portugal, Ireland, Italy, Greece and Spain) nations faced between 2007 and 2014, investor money from within the country and abroad fled. This resulted in increased cost of borrowing and production, declines in domestic investment, and slowing growth. The general market reaction is for interest rates on debt to rise, thereby making investment more attractive (higher yields  $\rightarrow$  cheaper debt) while government interest rates fall, (cheaper credit  $\rightarrow$  more borrowing  $\rightarrow$  more growth). In addition, the currency of the crisis nation is generally allowed to devalue, thereby making the nation's exports more attractive on the open market.

However, what happened in the European Union during the crisis was that as the PIIGS nations started to look riskier, money flocked to the safe haven nations, i.e. Germany and the wealthy Northern nations. As a result, their cost of borrowing plummeted relative to that of the rest of the EU. The euro did not face heavy devaluation as a result of the presence of these stronger nations within the EU (the currency would only depreciate if money left the EU), and as a result these nations

were unable benefit from that lever making exports more competitive. In addition, due to the reduced cost of borrowing that resulted from the flight to "gold," as it were, German financial institutions were able to lend heavily to their domestic industries as is evidenced by the chart below. During the crisis years, German industry was able to take advantage of the cheap credit offered by financial institutions and make heavy expenditure in R&D and to avoid layoffs and the flight of investor money and talent. What resulted was that the German economy was much better prepared to poise a strong comeback and to improve its competitive position within the EU when the other nations came out of the crisis, and when their citizens began to consume goods and services on the global stage once more.



#### Exhibit 4

These processes have resulted in the stratification of the membership of the European Union, where the wealthy nations are able to benefit more from the existence of weaker nations in the Union than the other way around. While analyzing other monetary and fiscal unions around the world, I noticed a trend that seemed prevalent which was that the majority of them (Multilateral Monetary Area (South Africa & satellites), Singapore & Brunei, CFA Franc (France & 15 former colonies)) had a strong protectorate state which managed the affairs of its brethren nations within their unions. The current system in place allows the larger nations within the EU to rely on the weaker nations during good times for demand and in turn, provides their citizens with access to quality products and services. However, when the markets turn, these nations are not afforded the same benefits. The narrative around the issues of bailouts and financial assistance packages to the weaker states was not one where there was a recognition of the benefits that these nations provide to the "protectors", but one of handouts financed by the savings and taxes of the wealthier nations to those

which were "unable" to manage their own finances. As a result, these processes call for and will continue to call for painful corrections in times of crisis to address the imbalances set forth in the current EU system.

#### 3. The Effects of the Crisis and the System At Present

In the aftermath of the crisis, there was a recognition that reforms would be needed to address these imbalances within the EU. A participatory union, where nations are able to rely on their fellow members for trade in the good times, and assistance in the bad times, is one of the underpinnings of the EU integration project and consensus seemed to be struck that there would need to be three major changes to the structure of the EU to assure all nations of the benefits they deserved. A number of these reforms were able to pass during the momentum of the post-crisis years, however, a number of political and economic factors neutered their overall implementation and have resulted in the stalled state of affairs to which the title of this paper refers. These reforms progress from those with the most potential to those with the least.

- 1. The need for a pan-European fund to address imbalances was made apparent in the early years of the crisis and during that time the troika, a combination of the IMF, the European Commission, and the European Central Bank, an ad-hoc arrangement of institutions was formed to deal with the day-to-day funding necessities of the crisis. This arrangement, however, was incredibly controversial due to the perceived and real sovereignty that was stripped from the nations through bailouts, budget approval and other mechanisms, and was influenced by the will of the larger nations which pooled in funds to create the "bazooka" that was needed to stem the declines of the crisis. A pan-European fund, akin to the US federal budget and aid programs that assist weaker states within the country, would need the authority to step in and assist debtor nations to provide liquidity and ensure that trade, loan generation and day-to-day operations of systemically important institutions like banks and large industrial giants could continue unhindered. This is one of the few reforms that ended up passing, in the form of the European Financial Stability Facility and the European Financial Stability Mechanism in 2010, two special purpose vehicles authorized to use up to 440 billion. EUR, guaranteed by the European Commission and using the budget of the EU as collateral to shore up institutions and governments in need.
- 2. European leadership also recognized the need for harmonized legal frameworks to respond to situations that arose within the EU. These were needed to address asymmetries in the treatment of industrial and financial institutional debt, bailouts for citizenry, austerity measures, bank recapitalization measures and a whole host of other frameworks that were needed to respond to the crisis. In addition, the union required a rethinking of the incentives that it used for compliance with the EU's financial standards. The most contentious issue of the financial crisis, and that which has become a leading cause of the rise of Euroscepticism in many European nations, is that of the austerity measures that were required of debtor nations in order to receive

financial assistance packages. Harsh austerity policies, restrictions on cash withdrawals and other consumer financial tools, and the discussion of bureaucrats from the EU and other nations stepping in to monitor the operations of the nation's government did little to garner goodwill, and research after the crisis shows that the focus on reining in spending, rather than stimulating the economy will result in a lost generation in each of these nations. While some policies to combat these ills did pass across the European Union, they generally remained within the realm of the financial sector which was most affected by the crisis and work is yet to be done to address the losses borne by the brunt of the population. These policies, however, remain guidelines and have not been codified into the body of law that the EU membership must follow, and thus far, there have not been strong incentive systems put in place to improve adoption.

3. The most unlikely, and yet the most necessary, reform of the EU is the formation of a fiscal union. As it stands, the EU comprises 28 states with wildly differing economies, standards of living, and with varied levels of state ability to absorb these crises. Little exists in the form of fiscal policy to address the imbalances laid out earlier in this paper, and there has not been a concerted effort on the part of member states to bring those issues to the fore. A number of targets laid out for nations to work towards were ratified by the EU membership in 2018, save the United Kingdom, and it is likely that uncertainty relating to the UK's withdrawal from the European Union will continue to dominate the legislative agenda for a considerable amount of time to come.

All of these processes have left the German people in an awkward situation with respect to the rest of the European Union (Christopher, 2018). According to polling data from Forsa, the number of Germans who were in favor of EU membership had remained steady at 82%, with the only portion of the populace considering a "Dexit" were those who identified as supporters of the populist AfD party, polled at 73% (Christopher, 2018). On the other hand, the proportion of the population who believed that further nations might choose to leave the EU has risen to 42%, a generally worrying sign for those who would like to ensure that further European integration remains on the agenda of the political parties in Germany (Christopher, 2018). According to the European Council on Foreign Relations' report on attitudes towards Europe amongst Germans, the Christian Democratic Union, Germany's ruling party (in coalition) for the majority of its post-war years is expected to be the greatest proponent of European integration (Guerot, Ulrike & Henard, 2018). However, voting data on policy measures shows that the party has refocused on the financial and political burdens of its status as Europe's shepherd. Furthermore, it argued that further debate on the future of the "confederation" process of the EU would be good for the CDU and the European project, in order to increase awareness among the electorate and to draw attention to the necessity for a European structure helping all citizens (Guerot, Ulrike & Henard, 2018). With rising Euroscepticism in countries throughout the EU, Germany would do well to make further European integration a legislative and communicative priority for the country and to ensure that concrete

steps are set forth for the rest of the membership, lest it continue to draw parallels to less charitable periods of its history (Guerot, Ulrike & Henard, 2018).

#### 4. Conclusion

By analyzing the outsize impact that Germany has had on the European Union, the benefits it has derived from the current structure, and the drawbacks that have resulted both domestically and abroad, one can see the struggles that the current system faces and the effects it will have in the years to come if corrective action is not taken. The European Union as a whole will need to design a policy that will result in a more equitable distribution of both the benefits of membership and the safety cushion that is currently enjoyed by some of the wealthier countries.

#### References

- European Union. (2017, May 9). A Peaceful Europe the Beginnings of Cooperation, European Union, Retrieved from europa.eu/european-union/about-eu/history/1945-1959 en.
- European Banking Federation. (2018). Banking in Europe. European Banking Federation, 2018, Retrieved from www.ebf.eu/wp-content/uploads/2018/09/Banking-in-Europe-2018-EBF-Facts-and-Figures.pdf.
- Cermak, Christopher. (2018, November 28). Make It Go Away: Germans Don't Really Worry about Brexit and Want EU to Be Uncompromising. Handelsblatt, © 2019 Handelsblatt GmbH Ein Unternehmen Der Handelsblatt Media Group GmbH & Co. KG Verlags-Services Für Werbung: Iqdigital.de (Mediadaten) | Verlags-Services Für Content: Digitale Unternehmens-Lösungen Realisierung Und Hosting Der Finanzmarktinformationen: Vwd Vereinigte Wirtschaftsdienste GmbH Verzögerung Der Kursdaten: Deutsche Börse 15 Min., Nasdaq Und NYSE 20
- Min. Keine Gewähr Für Die Richtigkeit Der Angaben. Bitte Beachten Sie Auch: Nutzungsbasierte Onlinewerbung | Cookie Einstellungen, 28 Nov. 2018, Retrieved from www.handelsblatt.com/today/opinion/make-it-go-away-germans-dont-really-worry-about-brexit-and-want-eu-to-be-uncompromising/23581998.html?ticket=ST-8041843-zk4OsczHViKmMZUR9bNi-ap5.
- European University Institute. (1955). Conseil Spécial De Ministres CECA-Négociations Du Traité Instituant La CEE Et La CEEA-1955-1957 (CM3-NEGO). Conseil Spécial De Ministres CECA-Négociations Du Traité Instituant La CEE Et... (CM3/NEGO), Retrieved from archives.eui.eu/en/fonds/94854?item=CM3%2FNEGO.
- Pew Center. (2019, March 19). Europeans Credit EU with Promoting Peace and Prosperity but Say Brussels Is out of Touch with Its Citizens. Pew Global. Retrieved from www.pewglobal.org/2019/03/19/europeans-credit-eu-with-

- promoting-peace-and-prosperity-but-say-brussels-is-out-of-touch-with-its-citizens/.
- Guerot, Ulrike, and Jacqueline Henard. (2018). What Does Germany Think about Europe? European Council on Foreign Relations, Retrieved from: doi:10.3897/bdj.4.e6460.figure2f.
- European Union. (n.d.) History of the Euro History of the Euro, Retrieved from ec.europa.eu/info/about-european-Commission/euro/history-euro/history-euro\_en#from-the-werner-report-to-the-european-monetary-system-1970-to-1979.
- Nederland, Business Insider. (2018, May 18). The 50 Largest Banks in Europe by Total Assets. Business Insider, Business Insider, Retrieved from www.businessinsider.com/the-50-largest-banks-in-europe-2018-5.
- UNI.LU. (2016). The European Communities. CVCE.EU by UNI.LU, Retrieved from www.cvce.eu/obj/the\_european\_communities-en-3940ef1d-7c10-4d0f-97fc-0cf1e86a32d4.html.
- The Schuman Declaration 9 May 1950. (2017, October 24). European Union. Retrieved from europa.eu/european-union/about-eu/symbols/europeday/schuman-declaration en.
- Central Intelligence Agency. (2018, February 1). The World Factbook: Germany. Central Intelligence Agency, Retrieved from www.cia.gov/library/publications/the-world-factbook/geos/gm.html.
- Translation of the Spaak Report . University of Pittsburgh, Retrieved from ei.pitt.edu/995/1/Spaak report.pdf.

IMF Data World Bank Data EuroStat Data

## Low Cost Carriers and Value Redistribution Along the Commercial Aviation Business System

### By Daniel Fridman

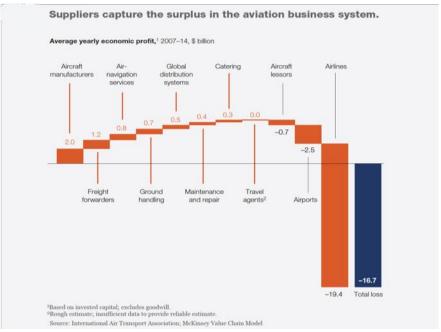
#### **Abstract**

Airlines have traditionally struggled to generate economic profits despite providing a service essential to the globalizing world. This paper explores the commercial aviation industry through the lens of industrial organization theory. Each link along the supply chain is explored with the aim of determining why airlines have not been able to capture excess value. It is also considered whether the emerging low-cost carrier business model has the potential to deliver long-run abnormal profits.

An analysis of the structural, strategic, and contractual relationships between aircraft manufacturers, maintenance and repair operators, airports, and aircraft lessors reveals low-cost carriers do not seem to possess a sustainable competitive advantage over their legacy counterparts. Oligopolistic upstream suppliers will continue to capture the majority of economic profits created through commercial aviation, given their bargaining power over fragmented downstream service providers, such as airports and airlines.

In certain niches, such as short-haul travel between secondary airports, there exists the potential for low-cost carriers to forge strategic alliances with smaller players along the supply chain and increase their share of economic value to sustainable levels. Nevertheless, issues with operating at scale limit the potential of the low-cost carrier model to provide a globally sustainable competitive advantage.

#### 1. Introduction



#### Exhibit 1

The airline industry has the deserved reputation of being one of – if not the – least attractive industry to be in. A 2010 analysis by New York University professor Pankaj Ghemawat showed airlines to be the least profitable U.S. industry, and a 2017 landscape assessment by McKinsey revealed airlines to have destroyed over \$20bn in shareholder value during the latest economic cycle (Dichter, 2017), which has been characterized by its unprecedentedly bullish nature.

Intense competition within the capital-intensive industry has historically prevented players from capturing value. While entry barriers are low due to high capital and regulatory requirements, consumers are highly price-sensitive as the product offering is homogenized, and oligopolistic suppliers — including manufacturers, ground services, and maintenance and repair ("MROs") — enjoy extraordinary bargaining power. Subsequently, most of the value in commercial aviation is captured by those suppliers (Dichter, 2017), as shown by McKinsey in Exhibit 1 above.

Nonetheless, the relatively recent success of low-cost carriers ("LCCs") has reinvigorated hope in a sustainably profitable model. Airlines like U.S.-based Southwest Airlines and JetBlue, alongside their European counterparts Ryanair and EasyJet, have enjoyed success operating point-to-point short-haul routes for price-sensitive passengers. Passengers are passed on cost savings stemming from better

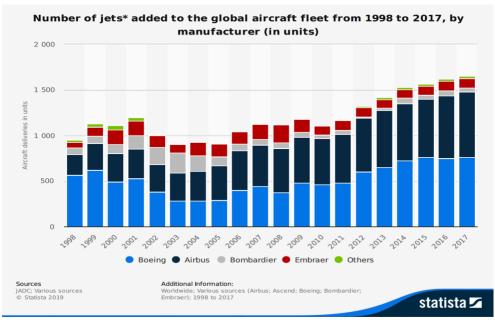
utilization, operational economies of scale, and a combative approach to fees imposed on airlines by airport operators. For example, Southwest exclusively operates the Boeing 737, allowing it to decrease the complexity of support services such as ground handling (improving turnaround time) and negotiate favorable long-term contracts with manufacturers, while Ryanair is known for flying to secondary airports and using remote gates with lower access fees. As a result, six of the ten most profitable carriers are LCCs ("Flight AirlineBusiness July-August 2018", 2018).

Not all LCCs have been successful, best demonstrated by the bankruptcies of Icelandic WOW Air, Portuguese Primera Air, and Berlin-based Germania (Slotnick, 2018) all occurring within the past year. Other established players, such as Norwegian Air Shuttle and AirAsia X, are currently struggling with significant financial distress (Spero, 2019). The reasons are varied, ranging from operational difficulties at Primera Air to what WOW Air's CEO called "bad publicity [and] negativity." (Tsang, 2019) As players along the commercial aviation value chain begin to adapt to the popularity of the LCC model, a number of questions remain. How will value be redistributed along the business system? Which players stand to benefit and lose the most? And most importantly, can LCCs sustain their competitive advantage over legacy carriers?

#### 2. Analysis

# A. The manufacturing duopoly can better predict demand and achieve economies of scale given the increased standardization of airline orders

Aircraft manufacturing is dominated by Airbus and Boeing. With the financial resources to acquire any would-be competitor such as McDonnell Douglas or ATR, the two companies enjoy a practically unchallenged duopoly on the global supply of airplanes. The resulting market becomes clear in Exhibit 2 below, with over 90% of 2017 deliveries fulfilled by Boeing and Airbus. Compounding the effect, in 2017, Airbus acquired 50.1% of the Bombardier CSeries program, which was the second most popular regional aircraft, prompting Boeing to announce an 80% joint venture with Embraer, the third biggest manufacturer (Zhang, 2018). Undoubtedly, the duopoly is under no competitive threat.



#### Exhibit 2

A stable duopoly discourages competition as the firms are incentivized to coordinate production and act much like one profit-maximizing monopolist. Thus, the two can focus on extracting value from their clients. Moody's estimates the average operating margin dollars from each delivery of a Boeing 737 Max 8 to be between \$12-15mm, which, given the average sale price of around \$60mm (Zhang, 2019), translates to an estimated mark up of around 30%. The 737 series – and Airbus' competing A320 family – is of particular interest as it is the LCCs model of choice. The ubiquity of the narrow bodies simplifies operations, maintenance, and crew training, prompting most LCCs to rely solely on one model. Southwest and Ryanair, for example, exclusively have 737s in their fleet, while JetBlue (apart from the 60 Embraer jets it is soon replacing) and EasyJet only use the A320 family. With the popularity of the LCC model, demand for those two series eclipsed other models, as seen in Exhibit 3 depicting the recent growth in fleet count ("FlightGlobal World Airlines Census", 2010-2018).

With LCCs driving a standardization in demand, Airbus and Boeing are able to optimize R&D spending. The design and manufacturing of the Boeing 787 carried with it a cost of \$32bn (Gates, 2011), while Airbus spent around \$15.4bn developing the competing A350 XWB ("Cost Jumps for Airbus A350", 2019). Comparatively, the cost for Boeing's 737 Max program was only ~\$3bn (Hamilton, 2012), while the competing A320neo cost is estimated at half that (Hamilton, 2012). While the comparison between the four programs is not exactly apples-to-apples, it is important to mention given how single-aisle jets account for 48% of delivery value, compared

with 42% for the larger twin-aisle (Thisdell, 2018). In fact, both manufacturers have begun to cut back the scale of their twin-aisle programs, with Airbus scrapping the A380 program and Boeing beginning to retire the B747 amidst a lack of demand.

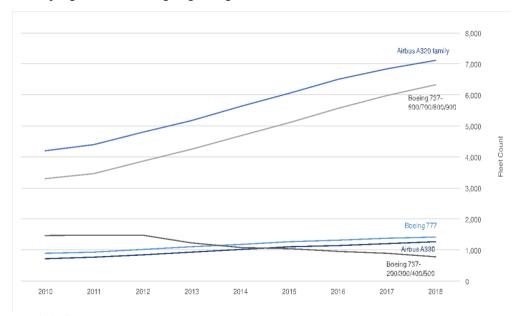


Exhibit 3

As the manufacturers streamline their product offering, they also augment their supply chain. For example, Airbus has two factories in Hamburg producing solely the A320 family. In the past, the site also produced the much larger A380, which required a fully separate assembly hall. The previously dormant building has been repurposed into a space "[automating] the artisanal methods of aircraft manufacturing" solely serving the A320 program. "With an order backlog of almost 6,000 A320s," Bloomberg columnist Benedikt Kammel writes, "Airbus must prioritize efficiency." Scrapping the A380 has done just that: in the new assembly hall, the company can produce around 10 planes per month – in line with other facilities but employing 20% less labor (Kammel, 2019).

Overall, thanks to their stranglehold of the market, the rise of LCCs has let manufacturers capture more value from suppliers and clients alike. After factoring in development costs, the economics of programs like the B737 Max and A320neo are significantly more attractive from a margin perspective. Due to their bargaining power, Airbus and Boeing are thus able to cut costs – and thus capture additional value from suppliers – without having to pass on savings to airlines and aircraft lessors. The balance of power is not projected to change any time soon. The only possible new entrant is China's Comac C919, a competitor to the A320/B737. However, the \$20bn program has been beset with delays, and nearly all of the backlog stems from Chinese companies (Boon, 2019).

# B. The manufacturers are rapidly expanding in-house service arms as the need for specialization decreases, forcing industry consolidation to compete on scale

Adjacent to the standardization of product offering is also the standardization of associated services. Traditionally, third parties have managed to capture value from the maintenance, repair, and overhaul needs of airlines. Oliver Wyman predicts the vast majority of MRO demand to be driven by the LCC-favored narrow bodies, with \$60bn of the \$110bn MRO market coming from the A320 and B737 by 2028 (Cooper, 2018). As manufacturers fulfill a ballooning order backlog, MRO providers are pressured to keep up with the increasingly standardized service needs of operators across the world. The resulting simplification has lowered technological barriers to entry, emphasized supply chain optimization, and generally increased the advantage of operating at scale. Both Boeing and Airbus have jumped on the opportunity to expand in a market whose growth is outpacing the need for aircraft. Boeing has publicly declared a goal of tripling MRO revenues to \$50bn within five years, and Airbus recently posted an 18% year-on-year jump in commercial services revenue (Freed, 2018).

Fearing the balance sheets and supply chains of the manufacturers, the industry has begun to consolidate in a flurry of M&A activity. One example is the consolidation of B/E Aerospace, Hamilton Sundstrand, Goodrich, and Rockwell Collins into \$23bn MRO juggernaut Collins Aerospace (Bellamy, 2019). By concentrating the supply of aftermarket parts and broadening their geographical reach, MROs hope to increase bargaining power against aggressively expanding manufacturers. Nevertheless, it remains difficult to compete with a vertically integrated one-stop shop. Airbus, which has recently announced a landmark contract covering Hong Kong Airlines' A350 fleet ("Hong Kong Airlines Chooses Airbus", 2018) not only can tap into its proprietary expertise, but could also incentivize operators to grant them service contracts in exchange for discounts on future airplane orders or interior upgrades.

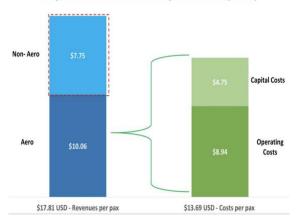
Other independent MRO companies have attempted to stem the tide by forming joint ventures with engine suppliers and the airframe manufacturers themselves. Such a strategy allows the smaller incumbent to leverage the suppliers' scalable operations, while the supplier gains access to the incumbent's existing client relationships and local expertise. Nevertheless, as the behemoth entrants gain experience in the business and expand their footprint, their 'need' for the relatively inefficient local operators drops. Exemplifying this, Singaporean SIA Engineering has entered into a joint venture with engine manufacturer Rolls-Royce. However, during a recent bidding process, Rolls-Royce's larger parent not only put in a bid, but also ended up winning the contract. To stay competitive, SIA is now looking to diversify into traditionally less attractive business lines, such as interior reconfiguration or aircraft liquidation.

While independents continue to be squeezed out of the market, it remains unclear whether manufacturers will be able to capture market share from consolidated giants like Collins Aerospace. Nevertheless, the general defragmentation of the industry is sure to increase the overall bargaining power of MRO service providers relative to their clients. MRO has historically been one of the only competitive segments in aviation, with airlines' ability to run reverse auctions forcing price-based competition. Now, it seems as if LCCs' increasing dependence on a limited number of airframes and engine options has begun to strip them of the privilege.

# C. LCCs's point-to-point model drives traffic to secondary airports, but intense ground logistics demands and unfavorable demographics thwart value extraction

Airports, often a forgotten part of the aviation business system, are at an inflection point with regards to private sector interest. Observers are realizing the bottleneck in the aviation growth story is airport infrastructure, driving a global trend of airport privatization (Gaffner, 2017), and states across the world have begun to rely on the private sector for value extraction. Over the past few decades, Australia, the United Kingdom, Germany, India, and many others have either fully or partially privatized most of their major airports. Sydney airport was privatized in 2002 and has since been owned by a subsidiary of the Australian investment bank Macquarie Group, which also owns the Brussels and Copenhagen airports ("Sydney Airport Sold to Bank-Led Group", 2002). The German government publicly offered shares in Frankfurt Airport in 2001, creating the joint venture Fraport in the process, in which the State of Hessen and City of Frankfurt own a 51% stake. Since then, Fraport has grown rapidly by acquiring majority and minority ownership stakes in airports across Europe, Asia, and South America ("Frankfurt Airport IPO Has Flat Takeoff", 2001). The United States is the only developed market where nearly all airports are publicly owned, as regulation has prohibitively restricted private sector interest. And yet, in 2018 Congress expanded the FAA Airport Privatization Program, doubling the number of airports eligible for the program (CAPA – Centre for Aviation, 2018).

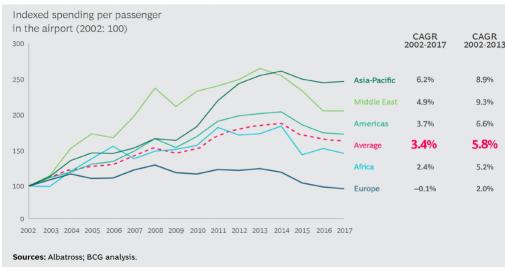
#### Airport Revenues Vs. Airport Costs (2017)



#### Exhibit 4

Privatization has forced economic self-sufficiency, and airports thus developed a diverse set of revenue streams. Those can be categorized in two main buckets, shown in Exhibit 4 ("2019 Airports Council International Airport Economics Report", 2019): aeronautical revenues ("AR"), including landing, parking, and passenger fees; and non-aeronautical revenues ("NAR") from ancillary services such as concessions, parking, and facilities leasing. Before privatization, airports exclusively served as transportation infrastructure with most revenue coming from AR. Nowadays, such a model is not fiscally sustainable as the total cost per passenger – including operating costs such as wages, and capital costs such as depreciation and interest expenses – exceeds AR per passengers. The ancillary services driving NAR are the key to profitability, prompting airports to transform themselves beyond infrastructure into globally competitive marketplaces. Over 50% of NAR comes from B2C services like retail concessions, food and beverage, and car parking, with B2B offerings such as real estate filling the remainder ("2019 Airports Council International Airport Economics Report", 2019).

The rise of LCCs threatens to disrupt both B2C and B2B. The demographic makeup of passengers traveling on LCCs skews younger, lower-income, and more price elastic; changing the dynamics of the \$70bn worldwide travel retail market. Research by the Boston Consulting Group, shown in Exhibit 5, shows a worldwide decline in average spending per passenger, driven by recent declines in Europe, the Middle East, and the Americas, along with stagnating growth in Asia-Pacific (Bianchi, 2018).



#### Exhibit 5

LCCs are great at reinvigorating travel retail in previously overlooked secondary airports such as Milan-Bergamo, London-Stansted, or Paris-Orly. Due to historical reasons, the majority of secondary airports operating at scale can be found in Europe, and the detrimental effect of serving mostly LCC passengers is evident in Exhibit 5 through the negative 15-year CAGR. LCC traffic in Asia has only recently begun to catch up to Europe as purchasing power increases and competition intensifies, leading to a stagnation in spending per passenger. In addition, passengers are increasingly spending less time at airports, with the average time spent from arrival until departure dropping from 150 minutes in 2013 to 133 minutes in 2016 (Atkins, 2017). LCCs influenced this trend, as smaller aircraft and restrictive cabin baggage policies have hastened the boarding process, while the typically lacking passenger-facing infrastructure in secondary airports decreases the incentive of arriving early. Despite the global growth in commercial aviation, travel retail – a key source in airports' NAR revenue – threatens to be left behind (Bianchi, 2018).

Concurrently, LCCs are very demanding in terms of the operational support they require. A key competitive advantage Southwest Airlines enjoys over legacy carriers is its 35-minute turnaround time. By not having assigned seats, Southwest is able to speed up its boarding process by 10 minutes compared to traditional processes, and utilizing secondary airports decreases taxi and docking time (Elliott, 2018). In order to serve LCCs, secondary airports are not only forced to take haircuts on the fees driving AR revenue, but also have to increasingly invest in their logistics services to keep up with the rapid process. As LCCs pack their scheduling with back-to-back flights, any delay on the ground has a cascading effect on the rest of the day's operations.

In extreme cases, this can sever the relationship between airline and airport.

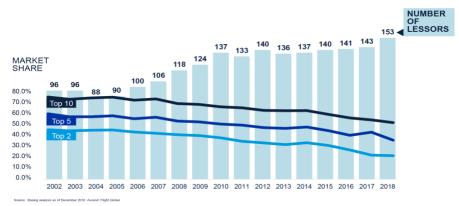
Ryanair was the first LCC to shift operations away from Frankfurt-Hahn, around 150km away from Frankfurt, to the main Frankfurt Airport, until then exclusively serving legacy carriers. Regulations force an operational curfew at Frankfurt Airport between 23:00 and 05:00, with any airline arriving after 23:00 receiving a considerable fine. In November 2017, 40 flights arrived after the curfew – 32 of those Ryanair flights. To avoid future fines, Ryanair has padded its turnaround time for inbound flights by 10 minutes, and permanently stationed additional Boeing 737s in Frankfurt to serve delayed passengers ("Ryanair Is Apparently Making All the Wrong Noises in Frankfurt", 2017). If this were Frankfurt-Hahn, Ryanair could simply shift its operations elsewhere.

As LCCs continue to grow passenger traffic across the world, secondary airports will have to invest heavily in services serving passengers and airlines. Both have become more difficult clients, as passengers spend less time and money at the airport, while LCCs' intense operational demands have the potential to capture value from secondary airports with lower bargaining power. Here, consumers are those who stand to capture excess value. Travel retailers have begun lowering prices and increasing the quality of their offering, while record low ticket prices are of course not reflective of the logistical challenges airports and airlines encounter daily.

# D. Aircraft leasing has been buoyed by cheap access to capital and increased demand from cash-strapped LCCs, increasing the cost of aircraft financing

According to industry consultancy CAPA, LCC fleets have a higher share of leased aircraft than their legacy counterparts. LCCs are often newer carriers without the balance sheet of established players, as operating on thin margins in a price competitive market easily prevents the buildup of the cash surplus necessary to purchase expensive aircraft outright. In February 2019, 59.5% of the entire LCC fleet was leased, compared to 50.7% of aircraft for all operators ("Attracting Low Cost Airline Funding: Leasing Is Pleasing", 2019). Since the 2008 financial crisis, the aircraft financing industry has benefited from a favorable macroeconomic environment. Low interest rates, increased global access to capital markets, and a resurgence in alternative investment funds' presence in the space have all increased the competitiveness of leasing against outright purchase.

#### Lessor fragmentation



#### Exhibit 6

The aforementioned factors, while increasing demand for aircraft leasing, have also driven competition in a market where the only barrier to entry is capital. Exhibit 6 demonstrates the recent fragmentation of the industry, with the market share of the top two leasing companies dropping from around 45% in 2008 to below 25% in 2018 ("Boeing Annual Report", 2018). In a drive to capture business in an increasingly competitive environment, lessors have begun entering into agreements with less creditworthy counterparties. The additional risk exposure has led the Wall Street Journal to claim how "bankruptcies could eventually tip the frothy [aircraft-backed securities market] into a downturn." In 2019 alone, 74 aircraft belonging to bankrupt airlines were leased – the highest number since 2013 (80) (SIndreu, 2019). When the increased bankruptcy risk is coupled with a surge in demand, an increase in the cost of aircraft leasing is a very real possibility. In India, where a lack of emergency funding has forced Jet Airways to suspend all operations since April 2019, analysts predict prices to go up by 10-15%. "Indian carriers would have to raise airfares by 3-5% to compensate against increasing operating costs," says a prominent Frost & Sullivan aviation consultant (Phadnis, 2019).

Globally, the LCCs low bargaining power with aircraft lessors is becoming evident. Their lack of a balance sheet and established credit history prevents them from accessing the only possible substitute – outright purchase – and thus lessors are beginning to leverage their favorable positioning over LCC clients. While such trends have driven increased interest in the space, intensifying competition and even prompting some worries of oversupply in aircraft available for leasing, the outlook for LCCs' continuous reliance on aircraft leasing remains grim. Financiers sense their ability to extract additional value out of locked-in customers, and the cost of leasing is set to continue increasing in the foreseeable future, at least until saturation of the market.

#### 3. Conclusion

The low-cost carrier model has undoubtedly disrupted the consumer-facing side of commercial aviation. Competition has driven ticket prices to record lows and increased consumer choice as airlines' offerings become unbundled. Baggage fees, for example, contributed to 30% of the \$15bn in profits recorded by U.S. airlines in 2017 (Goldstein, 2018), showing the strategy's ability to capture value for airlines from consumers. LCCs were first to innovate ticketing in this manner in the early 2000s. Legacy carriers, pressured by low ticket prices and sensing consumers' willingness to pay for what has now been made into an add-on, adopted this strategy just a few years later (Seaney, 2017).

Like many other innovations, unbundling is easily imitable. That really is the story in the commoditized airline industry. When one player comes up with a novel way of capturing value, the others simply imitate, to the detriment of the industry. Seeking to add switching costs, United Airlines created the world's first frequent flyer program in 1972. By the 1980s, all other American airlines – and British Airways – had followed suit. In an attempt to capture value from wealthy but price-conscious leisure travelers, EVA Air introduced Premium Economy in 1992. Virgin Atlantic, Trans World Airlines, United Airlines, and American Airlines all added a fourth class of service by the turn of the millennium ("The Evolution of Premium Economy", 2014). On the other hand, LCCs' operational structure is not as easily imitable. Legacy carriers sunk costs into expensive and inefficient wide-body aircraft like the A380, and their customers, disproportionately business travelers, expect a certain quality of service not only in the air, but also on the ground – a calm boarding process, close gate, and developed airport included.

And yet, it seems as if most value captured by LCCs will continue to be passed on to suppliers. Incumbent, and virtually unchallenged, manufacturers benefit from the standardization of aircraft orders. They will be able to exploit their economies of scale advantages to drive down their own costs without feeling the need to pass on savings to airlines. Servicing the aircraft will also become more expensive, though it traditionally is a space in which airlines have bargaining power. With a diminishing need for specialized knowledge, Boeing and Airbus are rapidly expanding in the MRO market, forcing consolidation amongst incumbents. Airlines are left with less of a choice, and thus the efficacy of their reverse auctions will decrease.

LCCs are also increasingly reliant on aircraft leasing companies, as their lack of cash prevents them from outright purchasing aircraft. Recent LCC bankruptcies, as well as excess demand driven by the grounding of the B737 Max, increased costs of borrowing. These are projected to continue rising as the demand for leased aircraft continues increasing due to the popularity of the LCC model, pressuring margins.

Airports, the final component of the business system, historically also struggled to capture value, as depicted in Exhibit 1. There, however, the recent wave of privatization has forced the innovative competition to extract value from both their B2C (passengers) and B2B (airlines) operations. Luckily for LCCs, the substantial amount of airport revenues comes from non-aeronautical sources like travel retail, and airports are thus incentivized to make operational concessions for LCCs as long

as passenger flow through the terminal increases. Nonetheless, the demographics of LCC passengers make it difficult to capture excess value. Airports, often a localized monopoly, are beginning to push back on LCCs' intense operational demands, as demonstrated by the Frankfurt Airport/Ryanair example.

Overall, it does not seem as if the low-cost carrier model can yield a sustainable competitive advantage. Passenger-facing innovations will continue to be imitated by legacy carriers, while any savings from operational optimizations are ripe to be harvested by suppliers. There is certainly a niche for LCCs, as Southwest Airlines' 52-year-long existence shows, but on aggregate it remains difficult to envision a consistently profitable industry. Scaling issues are a concern, as WOW Air and Norwegian Air have brutally experienced after the launch of their transatlantic low-cost services. Southwest Airlines has astutely avoided geographical growth, preferring to concentrate its operations on secondary airports in the United States. In the local niche, where airlines can forge close relationships with smaller airports and MROs (which lack bargaining power when compared to their bigger counterparts), low-cost carriers may succeed in capturing value. Apart from there, most LCCs will struggle with the same issues as legacy carriers.

#### References

Dichter, Alex. (2017). Buying and flying: next-generation airline procurement. McKinsey & Company.

Ghemawat, Pankaj. (2010). *Strategy and the Business Landscape*. United States: Ghemawat Publishing.

Flightglobal. (2018). Flight AirlineBusiness July-August 2018. United States: Flightglobal.

Slotnick, David. (2018). Primera Air, Which Sold \$99 Tickets from the US to Europe, Is Filing for Bankruptcy and Shutting down Operations. Business Insider

Spero, Josh. (2019). Norwegian Hit by Strike Threats and Losses. Financial Times.

Tsang, Amie. (2019). Wow Air, an Icelandic Budget Airline, Suspends

## **Corruption in Developing Economies**

### By Daniel Fridman, Kristian Osmeña Rüegg, and Aarthi Swaminathan

#### **Abstract**

In order to investigate corruption issues in developing economies, our approach attempts to syndicate insights gathered from past perspectives, devise an econometric model examining the relationship between corruption and growth across country income groups, and then apply the lessons learned to countries with varying levels of corruption. Throughout the policy analyses, we argue that in the case of resource-rich economies, sufficient diversification has been a crucial factor in determining whether the country will be adversely affected by corruption. In particular, we explore whether corruption had the potential to amplify economic crises stemming from commodity price shocks. Ultimately, we do not find strong empirical evidence suggesting corruption hinders economic growth. We hypothesize its overall effect to depend largely on the economy's stage of development, the type and scale of corruption, and the growth strategy employed by the country.

#### 1. Introduction

Sustained high growth is a powerful factor in alleviating poverty, reaching productive efficiency, and expanding opportunities for the future generation of a country's citizens (Department for International Development, n.d.). Thus, developing nations often focus their efforts on economic development. However, low and middle-income economies tend to be burdened by corruption. The World Bank considers countries low income if they have a GNI per capita under \$995, and middle income if under \$12,055 (both in 2018 USD). According to a report published by Transparency International, the average Corruption Perceptions Index for high-income countries is 65 (on an indexed scale), while low- and middle-income countries average 34 (a higher score represents less corruption).

Since the Great Divergence of the 19th century, when the Western world grew rapidly against the backdrop of the industrial revolution, developing economies have searched for methods to catch up. They attained tangible success in the post-world war era, with advanced economies averaging 2-2.5% growth, while developing economies were able to sustain growth above 5%. 13 cases — mostly in Asia — sustained 7%+ growth for 25 years before reaching the plateau of the middle-income transition (The World Bank, 2019). The process of economic development facilitates either capital accumulation or endogenous growth, which, as per the Solow Model below are the two main drivers of long-run growth (Spence, 2018).

$$(1)\,Y=A(K^\alpha L^{1-\alpha})$$

While the direct relationship between corruption and economic development is difficult to assess, academic research suggests corruption has significant effects on a host of key transmission channels, such as investment, competition, entrepreneurship, fiscal budgets, and human capital formation ("OECD Issues Paper on Corruption and Economic Growth", 2013). Nevertheless, prior literature on the quantitative relationship between corruption and economic development has failed to produce a consensus. Researchers such as Krueger (1974), Myrdal (1989), and Tanzi (1997) argue corruption inefficiently allocates resources and discourages private investment. On the other hand, Kolstad and Wiig (2013) indicate that foreign investors prefer to invest in corrupt countries, and many instances of a negative correlation between corruption and growth seem to disappear once controlling for factors such as foreign investment (Mauro 1995), political stability (Mo 2001), or institutional quality (Méon and Sekkat 2005).

Our approach attempts to syndicate insights gathered from such past perspectives, devise an econometric model examining the relationship between corruption and growth across country income groups, and then apply the lessons learned to countries with varying levels of corruption. Throughout the policy analyses, we argue that in the case of resource-rich economies, sufficient diversification has been a crucial factor in determining whether the country will be adversely affected by corruption. In particular, we explore whether corruption had the potential to amplify economic crises stemming from commodity price shocks. Ultimately, we do not find strong empirical evidence suggesting corruption hinders economic growth. We hypothesize its overall effect to depend largely on the economy's stage of development, the type and scale of corruption, and the growth strategy employed by the country.

#### 2. Statistical Analysis

We base our econometric model on an analysis on corruption in South Korea by Kim and Lim (2015) in the *Journal on Reviews on Global Economics*. In this paper, the authors attempt to isolate the effects of corruption on growth by controlling for growth inputs as per the Solow Model (1).

Similarly, we attempt to isolate the effects of *corruption* (as per the Corruption Perceptions Index, where 100 = total lack of corruption) on *gni* growth (as per the World Bank) while controlling for human capital *hc*, capital accumulation *ck*, and total factor productivity *ctfp*; which are compiled from the Penn World Tables 9.1 published by the University of Groningen. Finally, we attempt to control for exogenous (i) time- and (ii) country-specific shocks using (i) time dummy variables  $\delta_t$  and (ii) country fixed effects  $\alpha_i$ . We hence define our regression model as follows:

$$\frac{gni_{i,t}}{gni_{i,t-1}} - 1 = \beta_0 + \beta_1 corruption_{i,t} + \beta_2 hc_{i,t} + \beta_3 ck_{i,t} + \beta_4 ctf p_{i,t} + \delta_t + \alpha_i + u_{i,t}$$

After accounting for missing values, we are left with a panel of 1,986 observations across 113 countries and an average of 18 years of data.

	year	id	inco	me	gni	C	orruption	h	С	ck	ctfp
country											
Argentina	1999	5		2	-0.0	056040	30	2	.649621	0.029034	0.704074
Armenia	1999	6		2	0.0	033898	25	3	.083022	0.000714	0.248336
Australia	1999	7		3	-0.0	014259	87	3	.525668	0.056753	0.868590
Austria	1999	8		3	-0.0	031820	76	3	.101498	0.024942	0.893952
Belgium	1999	15		3	-0.0	020210	53	2	.956630	0.028802	1.053994
	,	/ear	id	inco	me	gni	corrupti	on	hc	ck	ctfp
							Corrupti	UII	110	CR	cup
country						<b>y</b>	сопири	UII	110	OK .	Cup
	aine 2	2017	171		1	-0.021645		30	3.272443		0.465375
	-	2017					j			0.026998	
Ukr	dom 2	2017	173		1	-0.021645	; ;	30	3.272443	0.026998	0.465375
Ukr United King United St	dom 2	2017	173 174		1 3	-0.021645 -0.043376	5 5 3	30 82	3.272443 3.757822	0.026998 0.169783 1.000000	0.465375 0.800780
Ukr United King United St Urug	dom 2	2017	173 174 175		1 3 3	-0.021645 -0.043376 0.034808	5 5 3	30 82 75	3.272443 3.757822 3.738714	0.026998 0.169783 1.000000 0.003761	0.465375 0.800780 1.000000

The *income* variable sets the World Bank Income Classification of each individual observation, e.g. Argentina in 1999, wherein  $income = \{0, 1, 2, 3\}$ , with 0 being *low income* and 3 being *high income*. A summary of the regression shown in (2) across income groups can be found below. Please note we exclude  $\delta_t$ ,  $\alpha_i$ , and the error terms for visual purposes as these are not the focus of our analysis.

variable	i	ncome = {(	0, 1, 2, 3		income = {0} n = 143     n(id) = 10				income = {1} n = 445       n(id) = 26			
variabic	n=	1,986     1	n(id) = 11	3								
gni	r-sq	P > F	Coef.	$P \ge  t $	r-sq	P > F	Coef.	$P \ge  t $	r-sq	P > F	Coef.	$P \ge  t $
corruption	0.3773	0.0000	0076	0.053	0.3135	0.0000	0010	0.611	0.3439	0.0000	0009	0.463
he			.0199	0.398			8513	0.660			.0139	0.821
ck			.1667	0.672			7.569	0.316			.0286	0.866
ctfp			.8527	0.000			.1650	0.254			.0368	0.539
		incom	= {2}			income	e={3}					
variable	n	income = 580    1			n	income 						
	r-sq			Ρ> [τ]	r-sq			P>  t				
variable		= 580    r	(id) = 32			= 818    r	n(id) = 45	P> t  0.746				
variable gni	r-sq	= 580    r P > F	(id) = 32 Cocf.	P > [t]	r-sq	= 818     r P > F	(id) = 45 Coef.					
variable gni corruption	r-sq	= 580    r P > F	Cocf0022	P > [t] 0.030	r-sq	= 818     r P > F	Cocf. 0001	0.746				

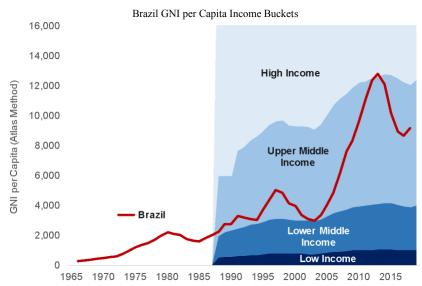
Highlighted in green are all statistically significant coefficients ( $\alpha = 0.05$ ) as per the fixed effects regression. As is usual with high level macroeconomic data, it is difficult to draw generalizable conclusions given the high p-values across test statistics. Nonetheless, there are a few observations worth noting:

- (1) Across all incomes, *corruption* is statistically significant at  $\alpha = 0.053$ , suggesting a relationship with *gni*. Interestingly, the negative coefficient can be interpreted as a *decrease* in *corruption* actually leading to a *decrease* in *gni* (as a higher corruption index signifies less corruption), ceteris paribus.
- (2) The relationship between *corruption* and *gni* is particularly pronounced in upper-middle income countries, with statistical significance at  $\alpha = 0.030$ .

Given our controls for Solow growth, as well as time- and country-specific effects, we believe the negative  $\beta_1$  coefficient merits further discussion. One interpretation is corruption functioning in a 'grease-the-wheels' capacity, where corruption allows one to bypass an ineffective or otherwise obstructive bureaucracy, in turn boosting productivity and investment.

We also note the extent of the effect in middle-income countries. One theory in economic development is the 'middle-income trap', in which resource-driven growth (through advantages in labor, ex. China, or natural capital, ex. Russia) flattens as the country has no competitive advantage versus high-income, services-based countries (Gill and Kharas, 2007). We postulate middle-income economies rich in natural resources are especially prone to rent-seeking behavior, amplifying the effects of corruption on economic development. The following policy analyses demonstrate this claim across countries.

#### A. Policy Analysis - Brazil



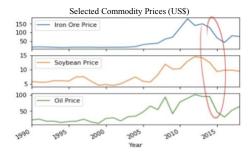
#### Exhibit 1

Brazil has experienced significant growth since World War II, and corruption has had a continued presence in its politics and economy. In 2018, Brazil ranked 105th

the Corruption Perceptions Index (*Transparency International*, 2018). The role and the impact of corruption on Brazil's economic development are difficult to define and measure because they are not static; they have evolved over time depending on several country-specific incidents, such as the exposure of various corruption scandals and the overall political atmosphere.

The prevalent corruption in Brazil did not necessarily hinder economic growth in the 2000s. In 2002, President Lula was elected to power, solidifying the 13-year reign of the leftist Workers' Party ("PT"). His emphasis on economic growth led to significant developmental progress despite allegations of corruption (Amadeo, n.d.). Policies include increasing government spending, an expansion of public sector employment rates, and the development of Brazil's natural resource industries (Amadeo, n.d.). These policies increased the macroeconomic stability of the country and showcased the government's commitment to growth, both of which are pillars of rapid economic development (Spence, 2018).

One example illustrating the coexistence of growth and corruption is the 2005 Mensalão Scandal. Therein, the Workers' Party paid monthly bribes of 12,000 USD, financed with state-owned companies' advertising budgets, to incentivize local deputies to vote for legislation in the party's best interests. Despite public scrutiny, supporters remained unconcerned with the practice, since their personal interests were not negatively affected (Zimmerman, 2017). Lula won re-election in 2006, and Brazil's economy continued to grow until the 2008 Financial Crisis (*The World Bank*, 2019).



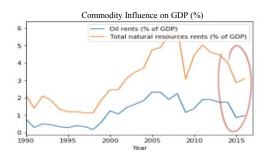


Exhibit 2 Exhibit3

In spite of the global recession, Brazil quickly recovered and continued growing under Lula's presidency post-2008 (Amadeo, n.d.). However, the country's economy was very dependent on commodity exports. This created a rapidly growing, yet vulnerable economy through 2010. As shown in the figures below, the country's dependence on commodities was clearly revealed when prices declined, leading to a corresponding decrease in exports (World Bank, IMF, FRED; 2019). This was one of the main triggers to an economic recession; GNI per capita fell 4.5% in 2015, followed by a 4.0% decrease in 2016 (Lewis, 2017).

The economic decline was further compounded by the exposure of Brazil's largest corruption scandal, Operation Car Wash, which involved bribery, collusion, and kickbacks. This can be seen as the turning point where corruption did in fact hinder Brazil's growth. Authorities discovered Operation Car Wash to be a wideranging scandal involving multiple Brazilian presidents, two former Peruvian presidents, and dozens of elite business figures. Two companies were at the forefront of the scandal: Petrobras, Brazil's state-controlled oil company and the largest oil company in South America, and Odebrecht, Latin America's largest engineering firm ("Corruption in Brazil", 2017).

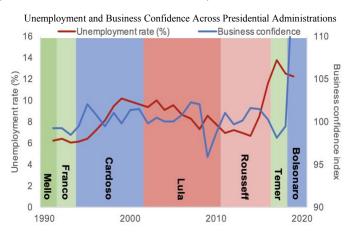
Petrobras colluded with Odebrecht and other smaller engineering companies by awarding them construction contracts in exchange for purposefully overbilling 3% of every transaction. These funds would then be deposited in a joint fund and subsequently laundered through a variety of small businesses, such as car washes and gas stations, and then used to finance political campaigns and bribe politicians to influence government policy ("Corruption in Brazil", 2017).

As one of the largest companies in Latin America, Petrobras' role in the corruption scandal led to negative economic ripples through Brazil. Petrobras and partner engineering firms, including Odebrecht, cancelled numerous infrastructure projects on reputational grounds. In 2015, Petrobras was forced to suspend construction of the \$14bn Comperj petrochemical complex. The project was supposed to generate an estimated 200,000 jobs. But Comperj did not open; construction ended when 13,000 workers were laid off as the result of a widespread graft investigation ("The biggest corruption scandal in Latin America's history", 2018). Comperj is just one example; such events transpired across the nation and Latin America, showcasing the effect of the scandal on everyday Brazilian employers and employees.

Political consequences from Operation Car Wash proved to be significant. Presidents Lula and Haddad were both put under investigation along with over 80 other Brazilian politicians, with Lula eventually sentenced to 13 years in prison ("Corruption in Brazil", 2017). Petrobras, the main company behind the scandal, saw their market capitalization decrease by over \$250bn (Google Finance, 2019). Odebrecht was fined \$2.6bn by the U.S. Department of Justice, with their CEO also serving a 19-year prison sentence ("Corruption in Brazil", 2017). The Workers' Party's reputation as a whole was tarnished, as former presidents Lula (2003–2011) and Temer (2016–2018) were both found to be involved. Even though President Rousseff (2014–2016) was never directly linked to the scandal, Operation Car Wash clouded her presidency. She was impeached for manipulating Brazil's government accounts balance, an ostensible excuse in the midst of Brazil's economic and corruption crisis. (Felter, C., & Labrador, R. C., 2018).

The investigation of the Workers' Party and other leading Brazilian politicians amplified the recession. Despite Brazil being a developing country, the country has historically had a very high social spending structure. For example, Brazil's generous pension system (an overhaul has since been legislatively approved under current

President Bolsanaro) accounted for 11.6% of 2016 GDP, roughly the same as Germany or Sweden (Kiernan & Jelmayer, 2016). These pension outlays, as well as other forms of government spending, were ingrained in Brazil's constitution, meaning they could not be reduced without congressional consensus. However, the corruption scandal exacerbated the lack of congruence between the executive and legislative branches of government, impeding policy makers' – particularly Presidents Rousseff and Temer – abilities to implement any expansionary fiscal policy. Through 2017, unemployment in Brazil peaked at 13.7%, more than double what it was just four years ago (Felter, C., & Labrador, R. C., 2018).



### Exhibit 4

As seen in the figure above, business confidence slumped significantly during the Rousseff and Temer administrations, as they were most implicated in Operation Car Wash ("The biggest corruption scandal in Latin America's history", 2018). Consequently, the cancellation of aforementioned energy and engineering projects played a direct role in shrinking Brazil's GNI, which decreased 4.5% in 2015 and 4.0% in 2016 (*The World Bank*, 2019). Project cancellations and layoffs tend to lead to a decrease in investment and higher unemployment and, thus, a decrease in consumer spending. Although difficult to quantitatively assess the effects on gross national income, it is clear that the exposure of corporate giants Petrobras and Odebrecht to Operation Car Wash had a negative effect on Brazil's growth throughout the 2010s.

Evidently, the persistent presence of corruption in Brazil throughout the 21st century only at times negatively impacted economic growth. Circumstances during President Lula's first and second presidential terms in the 2000s were vastly different than during his party successors' terms in the 2010s. The 2000s saw significant economic growth, even with the presence of corruption, which can explain why corruption was not at the forefront of Brazilian citizens' concerns. However, when Brazilians felt the tangible effects of Brazil's 2014 recession (the worst one on record)

and the compounding effects of Operation Car Wash, a massive backlash was certain. The subsequent loss in credible leadership and ripple effects from Petrobras and Odebrecht further amplified the crisis.

There is an argument to be made that a lack of diversification in the economy has amplified the negative effects of corruption. With the executive branch losing credibility, legislative efforts came to a gridlock. Sitting presidents Rousseff and Temer could not quickly or effectively pass expansionary fiscal policy, such as stimulus packages or a reigning in of Brazil's generous pension system – both necessary reactions to the negative shock to commodity prices.

Even if a stimulus package were passed, the multiplier effect of government spending would be significantly lowered by embezzlement and other applications of grand corruption. An example of this can be found in Tanzania. In 2009, the Bank of Tanzania, and the Tanzania Investment Bank, passed a \$26 million stimulus package for cash crop exporters affected by the global dip in commodity prices. In 2011, it was revealed that \$25 million of this could have been embezzled (Fric, 2011).

Finally, corporate inefficiencies are exposed during a recession. Petrobras, the state-controlled powerhouse of the Brazilian economy, had no problem overpaying Odebrecht or other contractors due to their political links. The firm did not feel recessionary pressures during the prolonged oil rally, but in the event of a shock, cost-cutting is crucial. Therefore, the \$1.2bn in overpayments (Edgerton, 2014), compounded with an \$853 million fine from the Department of Justice (Mandl, 2018), had a material effect on corporate performance. Brazil was fighting two storms at once: reliance on commodities and the economic backlash to extreme corruption; each one amplified the effects of the other.

### B. Policy Analysis - Indonesia

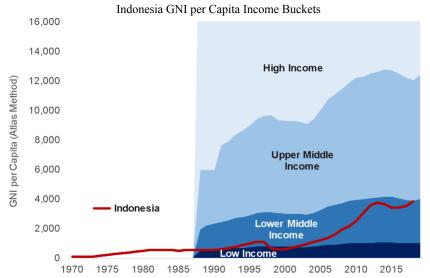
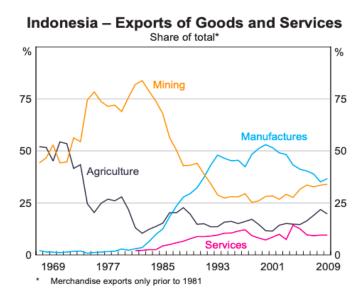


Exhibit 5

Indonesia ranks a lowly 89th in the 2018 Corruption Perceptions Index, tied with Sri Lanka, Swaziland, and Bosnia & Herzegovina. Nonetheless, despite the presence of rampant corruption, economic development has not been impeded because of prudent macroeconomic policies that helped the country reduce its reliance on its commodity exports. Indonesia, therefore, is projecting high levels of economic growth and retains favorability amongst foreign investors (The World Bank, 2018).

While some commentators argue corruption has been a significant deterrent to economic development (White, 2006), Indonesia has experienced significant growth throughout the 21<sub>st</sub> century. Real GNI per capita growth was 4.1% in 2018, making it the fourth fastest growing economy in Asia (The World Bank, 2019). Investors have been placing bullish bets, seeing opportunity in the archipelago because of the growth of its labor-intensive industries that are reaping the benefits from global trade (Brooks, 2012). This is in addition to President Joko Widodo's massive infrastructure plans that are expected to fuel the economy and add jobs (Hutton, 2018).

The graph below shows how Indonesia's deliberate diversification efforts in the 1980s led to the growth of the manufacturing and services industry (*Reserve Bank of Australia*, n.d.). Indonesia possesses several types of natural resources — from oil to geothermal energy to liquefied natural gas, as well as minerals like copper and gold. But it began to diversify into manufacturing industries in the 1980s as it felt a strain on its currency and economy as oil prices weakened. The country, up to that point, was largely dependent on oil exports, which constituted 63% of Indonesia's output (Zen, n.d.).



### Exhibit 6

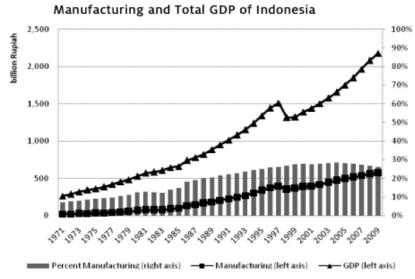
At that time, labor costs were increasing around the region, and textile-based companies were looking to shift from countries like Taiwan, South Korea, Hong

Kong and Singapore, to lower-cost destinations. Indonesia seized the opportunity, which led to the rapid growth of the sector, pushing the manufacturing industry's contribution to output higher (Zen, n.d.).

Today, Indonesia continues to pursue a diversified economic plan, poised to benefit further from prevailing macroeconomic conditions. The steady recovery of oil prices in the past few years had led to a commodity boom, stimulating economic growth. At the same time, rising wages and production costs in China – and now trade tensions – have made Indonesia an attractive manufacturing destination, with companies like iPhone assembler Pegatron moving to the archipelago (Li, 2018).

Simultaneously, corruption has remained steadily present in Indonesia, with patronage structures outlasting presidential administrations. Political corruption in Indonesia, climaxing during former President Suharto's authoritarian rule, exists primarily in the form of extensive bribery (McLeod, 2010). Effects are predominantly found in the public sector, which directly impacts foreign investor confidence and deters the funding of domestic projects (White, n.d.).

Furthermore, bribery is also seen by commentators including Hadi Kuncoro from the ASEAN Economic Bulletin as lowering corporate default rate by 'greasing' bureaucratic red tape and accelerating approvals, funding requests, and tax reconciliation. The Suharto era had been a 'one-stop shop' where corruption was centralized, offering some level of stability to bribe-givers in terms of price and quantity, without having a visible impact on economic growth (Kuncoro, 2006).



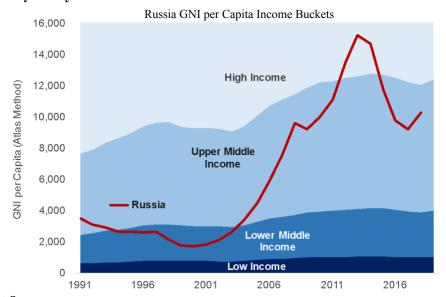
### Exhibit 7

Exhibit 7 above shows that, aside from declines attributed to the Asian Financial Crisis and a global shock to commodity prices, Indonesian growth has continued

accelerating over the past 40 years, with no discerning impact from corruption during either today's or any previous administration (*Statistics Indonesia*, 2010).

Hence, the case of Indonesia is a compelling example of our thesis: if a country is well-diversified, even if it is experiencing corruption within its institutions, it will not necessarily impede its economic development.

### C. Policy Analysis - Russia



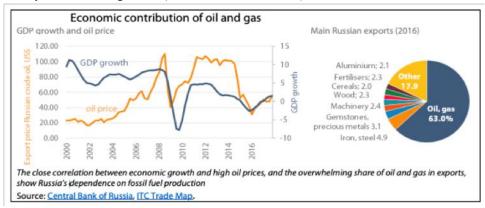
### Exhibit 8

Conversely, a Russia suffering from systemic corruption across its political offices, was ranked 138th in the 2018 Corruption Perceptions Index, behind Laos, Myanmar, Bolivia, and Honduras, to name a few (Transparency International, 2019). In Russia, economic development has been directly hurt by flawed macroeconomic policies, including those that have not reduced the country's reliance on energy exports. These factors led to Russia projecting mediocre levels of economic growth and losing favorability among foreign investors (Foreign Direct Investment in Russia is Falling, 2019)

Russia has been recovering from a severe recession; in 2018, its GNI per capita grew 2.3% (*The World Bank*, 2019). Business sentiment is weak given the institutional uncertainty, lack of structural reforms, and international sanctions

(placed on Russia because of its annexation of Crimea) restricting access to global capital markets (*Organization of Economic Cooperation and Development*, 2017).

Historically, Russia, like Brazil and Indonesia, has been blessed with a wealth of natural reserves – from diamonds to oil – which has driven exports since the Soviet era. In 2017, energy exports contributed to 17.8% of GDP, overall representing 59 percent of exports, and highlighting the importance of natural resources to the country's economic growth (*The World Bank*, 2019).



### Exhibit 9

Russia's economy is so dependent on the natural resource that the country becomes highly sensitive to fluctuations in oil prices, as seen in the graph below, which demonstrates the high correlation between the Russian Ruble and spot oil prices. This relationship has a significant impact on economic growth because it reveals a massive vulnerability. For example, when oil prices fell in 2008 and in 2014, the Russian economy and economic growth took a direct hit, with the European Parliamentary Research Service estimating that a drop of US\$10 in the price of a barrel of crude oil shaved off 0.8% of Russian GDP (Chakarov, 2015).

Concurrently, corruption has been pervasive across Russia, with patronage structures morphing over time to form what could be described as grand corruption. Corruption in Russia, argued to be one of the most important factors that contributed to the fall of the Soviet Union (Dallin, 1992), has continued to plague the country, suppressing not only business sentiment, but also overall investment in privately owned companies in Russian regions ("IHS Markit Russia Business Outlook", 2018).

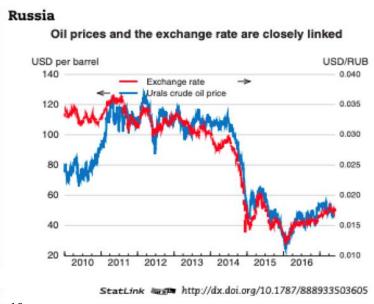


Exhibit 10

The current form of corruption that historians attribute to Brezhnev's regime turned informal practices like bribery into clientelist networks in the early 1990s (Dallin, 1992). These created even more sophisticated vehicles for corruption, such as nation-wide privatization, creating a class of oligarchs leading to the authoritarian rule under Vladimir Putin (Schulze & Zakharov, 2018).

When current President Putin ascended to power in 2000, he was rumored to have struck a bargain with the oligarchs. In exchange for their political cooperation, he offered to respect property rights and not reverse privatization efforts (Buckley, 2018). Around the same time, Putin also decided to consolidate the lucrative oil and gas industries into Gazprom and Rosneft, which Noah Buckley from the Foreign Policy Research Institute says creates more opportunities for graft.

Russian leadership has not made credible efforts to diversify their economy, hence retaining their vulnerability to negative shocks during commodity price dips. Overdependence on energy has been the root cause of poor economic growth (Trickett, 2018). Energy revenues finance both military and social spending, which make it difficult to impose major reforms, since half of Russia's federal budget comes from taxes and revenue on energy companies (Trickett, 2018). Furthermore, some argue that the entire structure of production in Russia is geared towards energy; therefore, initiating genuine reform would require the dismantling of the entire distribution system (Gaddy, 2011). This puts Russia on a tight path that continues to rely on oil for economic development, unlike Indonesia.

Thus, unlike in Indonesia, growth under Putin's administration has stalled considerably. Excessive dependence on oil as a revenue driver combined with a high level of corruption demonstrates our thesis: if a country is ill-diversified, there is

empirical evidence of corruption having a detrimental impact on economic development.

### 3. Conclusion

Thus, this paper has demonstrated, through the case studies of Brazil, Indonesia and Russia, that corruption does not necessarily hinder economic growth. In the case of resource-rich countries in particular, we found that sufficient diversification has been a crucial factor that determines whether the country was adversely affected by corruption. When a country is well-diversified, such as in Indonesia, despite high levels of corruption, corruption has no tangible impact on economic development because the country's revenue streams are independent and able to perform despite bureaucratic inefficiencies. It is not reliant on a single source for revenue.

Conversely, in the cases of Brazil and Russia, we found that a lack of diversification has directly negatively impacted economic development because their revenue streams are completely dependent on prevailing commodity prices. The primary reason for this relationship is because leadership has failed to diversify sufficiently. When adverse shocks hit the country, such as when there is a rapid fall in commodity prices, these energy-dependent economies are unable to perform in other areas, which highlights and magnifies bureaucratic inefficiencies. Hence, corruption in ill-diversified countries impedes economic growth because leadership in these countries are unable to develop alternative revenue streams, perhaps a result of policy inaction or inability.

### References

- Amadeo, K. (2019, July 4). How to Ruin an Emerging Market Success Story. Retrieved from https://www.thebalance.com/brazil-s-economy-3306343.
- Boediono, Lestari. (2018, March 27). Indonesia Continues to Build on Solid Economic Growth. Retrieved from https://www.worldbank.org/en/news/press-release/2018/03/27/indonesia-continues-to-build-on-solid-economic-growth.
- BP Statistical Review of World Energy. (2017). BP p.l.c. [PDF file]. Retrieved from https://www.bp.com/content/dam/bp-country/de\_ch/PDF/bp-statistical-review-of-world-energy-2017-full-report.pdf
- Brazil's Operation Car Wash (image). International Bar Association.
- Brooks, Douglas H. (2012, August) Indonesia's Domestically Driven Growth: Where Will the Jobs Come From? United States-Indonesia Society.
- Buckley, Noah. Corruption and Power in Russia. (2018). The Foreign PolicyResearch Institute.
- Building Jobs and Prosperity in Developing Countries. *Department for International Development.*
- Chakarov, I. (2015, October). Oil, not sanctions, caused Russian GDP to fall. Vedomosti.
- Dallin, Alexander (1992). Causes of the Collapse of the USSR. Post-Soviet Affairs,

- 8:4, 279-302
- Edgerton, A. (2014, November 11). Petrobras Overpaid by \$1.2 Billion, Tribunal Probe Shows. Bloomberg News.
- Felter, Claire and Labrador, Racio Cara. (2018, November 07) Brazil's Corruption Fallout. *Council on Foreign Relations*.
- Fric. (2011, June 05). Dar loses \$25m from stimulus package. The East African.
- Kharas, H., & Gill, I. (2008). An East Asian Renaissance: Ideas for Economic Growth. *Asian-Pacific Economic Literature*, 22(2), 57–59.
- Gaddy, C. G. (2016, July 28). Will the Russian Economy Rid Itself of Dependence on Oil?
- Guriev, Sergei and Rachinsky, Andrei. (2005) "The Role of Oligarchs in Russian Capitalism." The Journal of Economic Perspectives, vol. 19, no. 1, 2005, pp. 131–150.
- Hutton, Jeffrey. (2018, March) Prabowo Vs Widodo: What Makes General Think Indonesian Election Will Be A Case Of Second Time Lucky? South China Morning Post.
- Issues Paper on Corruption and Economic Growth. (n.d.). OECD. [PDF file]. Retrieved from https://www.oecd.org/g20/topics/anti-corruption/Issue-Paper-Corruption-and-Economic-Growth.pdf
- J, H. (2013, November 18) What is Brazil's "mensalão"? The Economist.
- Jones, S. and Joanna V. IHS Markit Russia Business Outlook. (2018, July 16). Retrieved from
  - https://www.markiteconomics.com/Public/Home/PressRelease/9f0d1b22147f4c 88b393fc03648149dd.
- Kiernan, P., & Jelmayer, R. (2016, March 03). Brazil's Economy Shrinks by Most in 25 Years. The Wall Street Journal.
- Kolstad, I. & Wiig, A. (2013). "Digging in the Dirt? Extractive industry FDI and corruption," *Economics of Governance*, vol. 14(4), 369-383,
- Krueger, A. (1974). The Political Economy of the Rent-seeking Society. *American Economic Review* 64: 291–303.
- Kuncoro, Ari. (2006, April) Corruption and Business Uncertainty in Indonesia. ASEAN Economic Bulletin, vol. 23, no. 1, 2006, pp. 11–30.
- Lewis, J. T. (2017, March 07). Brazil's Economy Shrinks for Second Straight Year. The Wall Street Journal.
- Li, Lauly. (2018, December) Pegatron shifts from China to Indonesia as trade war bites. Nikkei Asian Review.
- Loyd, Ryan & Oliveira, Carlos. (2016, May 25) How Brazil's electoral system led the country into political crisis. The Washington Post.
- Mandl, C. (2018, September 27). Brazil's Petrobras to pay \$853 million U.S. fine in Car Wash probe. Reuters.
- Matthews, C. (2014, August 7). When corruption is good for the economy.
- Mauro, P. (1995). Corruption and Growth. *Quarterly Journal of Economics*, 110, 681-712.

- McLeod, Ross. (2010, February) Institutionalized Public Sector Corruption: A Legacy of the Soeharto Franchise (February 2010). Working Papers in Trade and Development, ACDE, Crawford School of Economics and Government, Australian National University, Canberra.; Crawford School Research Paper No. 2010/02.
- Méon, Pierre-Guillaume & Sekkat, Khalid. (2005) Does corruption grease or sand the wheels of growth?, Public Choice, 122, issue 1, 69-97.
- Mo, P.H. (2001). "Corruption and Economic Growth," *Journal of Comparative Economics*, 29, 66-79.
- Myrdal, G.(1989). Corruption: Its causes and effects. *Political Corruption: A Handbook New Brunswick*, 1989, Transaction Publishers, New Brunswick, N.J. and Oxford, 953-961.
- Nadler, Judy & Schulman, Miriam. (2015, October 23) Favoritism, Cronyism, and Nepotism. Sustainability Office of the Provost Santa Clara University.
- Nuijten, M., & Anders, G. (2017). "Corruption and the secret of law: An introduction". *Corruption and the Secret of Law* (pp. 1-24).
- Phyo, Aung Kyaw. (2012) Policy Outcomes in Indonesia Before and After Democratization. MPA/MPP Capstone Projects. 73.
- S. Winters, Matthew & Weitz-Shapiro, Rebecca. (2013, July) Lacking Information or Condoning Corruption: When do Voters Support Corrupt Politicians? *Comparative Politics* Vol.45, No.4, pp. 418-436
- Schulze, Gunther G. & Zakharov, Nikita. (2018, February 05) Corruption in Russia Historic Legacy and Systemic Nature. CESifo Working Paper Series No. 6864.
- Spence, M. (2018, September 25). *Growth in Developing Economies*. Lecture presented in New York University, United States.
- Spence, M. (2011) *The Next Convergence The Future of Economic Growth in a Multispeed World*, (New York: Farrar, Straus and Giroux, 2011), 65
- Tanzi, V. (1997). Corruption, Public Investment, and Growth. *International Monetary Fund*.
- Taylor, Matthew M. (2017, June 02) Brazil's Most Underreported Reform Battle. *Council on Foreign Relations*
- The Economist. [The Economist]. (2017, September 1). Corruption in Brazil: the scam that put politicians behind bars. Retrieved from https://www.youtube.com/watch?v=6eyBWX3hVaE
- Trickett, N. (2018, April 5). Analysis: Why Putin's oil maneuvers will keep Russia in the Middle East.
- Vollmer, J. (2019, December 3). Foreign Direct Investment Into Russia Is Falling. Retrieved from https://www.themoscowtimes.com/2019/05/22/foreign-direct-investment-into-russia-is-falling-a65690.
- Vox. [Vox]. The biggest corruption scandal in Latin America's history. (2018, October 26). Retrieved from https://www.youtube.com/watch?v=uMXumMJZYYI

- Wang, P. (2012, November 20). The Rise of the Red Mafia in China: A case study of organized crime and corruption in Chongqing.
- White, Andrew. (2006) The Paradox of Corruption as Antithesis to Economic Development: Does Corruption Undermine Economic Development in Indonesia and China, and Why Are the Experiences Different in Each Country? Asian-Pacific Law and Policy Journal. 8, (1), 1-34. Research Collection School Of Law.
- Wood, Andrew. (2018, March 15) Putin and Russia in 2018-24: What Next? Chatham House.
- World Bank Group. (2018, May 1). Russia Economic Report, May 2018. Retrieved from https://openknowledge.worldbank.org/handle/10986/29913. (2018, December 12) Corruption Perceptions Index 2017. Transparency International.
- World Bank Open Data. *The World Bank*. Retrieved from https://data.worldbank.org/
- Zen, Fauziah (n.d.). Economic Diversification: The Case of Indonesia's Revenue. Watch Institute.
- Zimmerman, N. (2017, December 19). How Brazil Went From Neoliberal Success Story to Political Chaos in 10 Years.

# The Alaska Permanent Fund: Organizational Structure of the Alaskan Sovereign Wealth Fund

### By Cameron Taheri

### **Abstract**

A growing force in the global macroeconomy derives from investing activities executed by Sovereign Wealth Funds (SWF) that hold immense reserves from foreign exchange or endowments from state and national initiatives. Though the Alaska Permanent Fund (APF) may not spark parallel portraits of foreign wealth from the Middle East or rapid capital accumulation within Asian economies, it has an initial funding similar to many SWFs as well as a competitive amount of assets under management. Most of the literature relevant to SWFs has focused upon international entities, and the eyes that have honed in on the APF specifically are fixated upon its dividend program for eligible residents of the state of Alaska. This paper will aim to cover the APF Corporation (APFC)—the governing entity that manages the APF's assets—from a governance perspective to understand the entity's organizational structure, its internal and external monitors, and how its monitors help shape its investment strategies. Alaskans certainly have a degree of dependency—current and future—upon the success of not simply the APF's investments but also the oversight of these investments and how the APF's board of trustees interact with their monitors.

### 1. The "Rentier State" Establishes the Alaska Permanent Fund

Since Russian occupation of Alaska in the 1800s, the region's economy has been driven by the state's abundant natural resources, such as precious metal mining and freshwater fishing, which was a primary reason as to why the federal government was inclined to purchase the Alaska territory from the its Russian neighbors. Although mining, fishing, and agriculture play a part in the state's economy, Alaska's oil digging account for about 85% of its economic activity (Lynch & Miller, 2019). As with many resource dependent economies, market risks surrounding the oil that funnels the bulk of Alaska's revenues can subject the state to extreme volatility y in year-to-year oil revenues. Price volatility can translate to lower revenues for the state in certain years and higher revenue in others, creating a risk of budget deficits in times of economic contraction (Brown & Thomas, 1994).

Upon the discovery of oil in Prudhoe Bay and the subsequent state purchase of the oil field from the federal government, some state officials grew concerned over the likelihood of pork-barreling the revenues from the field towards state-led initiatives that would not be to the benefit of the broader Alaskan population. Establishing a separate fund—essentially a rainy-day savings account—carried

questions about how to efficiently allocate the income earned from investing the oil revenues in "income-producing investments." A decision to establish a dividend program to all Alaska citizens, initiated by Governor Keith Miller and implemented under Governor Jay Hammond, was eventually formalized into a bill and passed. To this day, Alaskans receive dividend payments from the APF's Earnings Reserve Account—a component of the APF that is broken down in later sections of this paper—which holds ever-growing assets due to the cash flows from the fund's realized gains (Brown & Thomas, 1994).

### 2. Defining Sovereign Wealth Funds

Before delving into the governance of the APF it is important to understand what constitutes as a sovereign wealth fund (SWF) and how they are often falsely presumed to actively influence a firm's management. With growing pools of assets under management, various approaches have arisen to categorizing these financial entities so as to better understand the role they play in international capital markets as well as how their governance may impact the strategies they execute. Going forward, "sovereign wealth funds are a by-product of national budget surpluses, accumulated over the years due to favourable macroeconomic, trade and fiscal positions, coupled with long-term budget planning and spending restraint" as well as a tendency to be charged with a specific task in fiscally aiding the economy it is housed in. In many cases, these SWFs look to control the amount of risk involved in employing their investment strategies (Rozanov, 2005, p. 2). Their aim is to implement a risk-return balance that enables them to achieve high absolute returns so as to further economic and social initiatives and provide liquidity in times of financial crisis, amongst other missions assigned to the entities.

The sheer size of SWFs like the APF helps explain the recent concerns and scrutiny led by investors who are honing in on whether SWFs act as passive investors or active influencers. Rose suggests that SWFs intentionally structure their transactions of companies' outstanding shares so as to avoid majority shareholder status and the regulatory consequences brought on by the relevant US government agencies, such as the Committee on Foreign Investment in the US (Rose, 2008). Control of a company can alarm investors, particularly when SWFs tread close to heavily influencing management by acquiring a sufficient block of a company's outstanding capital. Once an investor purchases the necessary number of shares to equal 25% of outstanding capital, as per the Code of Federal Regulations, the entity carries control of the company (Legal Information Institute, 2019). This control is defined as "the power to exercise a controlling influence over the management or policies of a company whether through ownership of securities, by contract, or otherwise," (Legal Information Institute, 2019). However, triggering control of a company requires the SWF to decrease its opacity for US regulators to ensure their investment is not of malintent with regards to control of a company.

Yet, it is not so clear whether SWFs are willing to go this extra mile to exercise such influence on a company. This may be explained through agency costs, or the

cost of having an agent act on behalf of a principal (e.g. investors have agency costs associated with entrusting a board of directors to manage company executives). Suspicions around a SWF investing in a company may lead to higher agency costs, Rose indicates, due to investors gauging the intentions of these entities or due to an increase in passivity from investors that lowers monitoring of management since SWFs would in theory be sure to pay close attention to their investments. Despite the suspicion and possible free-rider problem, much of the time these "SWFs act like a large block of management votes, to the displeasure of more active investors," suggesting their passive investments, though large, do not constitute an impending influence on management (Rose, 2008).

### 2.1. Fitting the SWF Profile

Generally, SWFs fall under two categories with regards to the funding of the assets they employ in their investment strategies: commodity and non-commodity (Firzli & Franzel, 2014). The former refers to flows of revenue from commodity-based activities directed towards the SWF, and the latter involves other flows of revenue—that do not include a commodity—to be directed towards the fund. Unlike many of the SWFs investing in US companies, the Alaska Permanent Fund (APF) was established in 1976 not only for the aforementioned purpose of hedging against volatile oil prices but also with foresight of the future of Alaskans after Prudhoe Bay dries up (Brown & Thomas, 1994).

Since the effect of establishing an entity entrusted to save and invest funds for Alaska's welfare—particularly for the time period following the depletion of oil reserves—state officials called a referendum for the population of Alaska to amend their state's constitution, ultimately creating the "SUV" of American investment vehicles. Citizens of Alaska passed the referendum with a win ratio of about 2 to 1, suggesting Alaskans hold a long-term perspective with regards to the future of their economy and possibly wish to diverge from the risks of uncertainty byway of what can be described as a savings account (Brown & Thomas, 1994). In order to effectively grow these savings, the state of Alaska created a quasi-independent state entity called the APF Corporation, which is charged with one mission: "to manage and invest the assets of the [Alaska] Permanent Fund and other funds designated by law," (Alaska Permanent Fund Corporation [APFC], 2019). In its most recent monthly disclosure of the fund's holdings, the APFC reports total fund holdings with a market value of approximately \$66.3 billion USD and in the past five years alone has achieved total returns of 7.13% (APFC, 2019; APFC Board of Trustees, 2019). With regards to the previously mentioned activity of SWFs and how investors respond to their presence amongst the crowds of other investors, little empirical evidence exists over whether or not the APF strategically structures its transactions in order to intentionally avoid US regulators from inspecting their investments. What is evident from their disclosures and press releases is that the SWF aims to diversify its immense fund globally, constrain excessive risk, achieve absolute returns above relevant benchmarks, and inflation proof the fund's Principal Account (APFC, 2019).

Since little public information regarding exact investment strategies are available, further understanding structural aspects presiding over Alaska's savings account and the investments it executes allows for a wider discussion of the APF's oversight and how its monitors shape its investment strategy.

### 3. A Dual Account System: "Savings and Investment"

Alaska's future prosperity has been placed in the hands of the APFC's staff and Board of Trustees who claim to have "successfully converted non-renewable oil and mineral resources into a renewable resource in the form of income-producing financial assets," (APFC, 2019, p. 6). With regards to the structure of the fund itself, there are two separate divisions, or accounts: the Principal Account and the Earnings Reserve Account. An emphasis on the preservation and growth of the fund's assets for future generations of Alaska's citizens is evident from the fund's requirement of inflation proofing the Principal Account by tracking the US Consumer Price Index (CPI) and reallocating realized earnings—which flow into the Earnings Reserve Account—towards the Principal Account in order to maintain its purchasing power and achieve the desired long-term goal of an average real rate of return of 5% (APFC, 2019). Whereas the Principal is not meant to be spent by the Alaska State Legislature. the state has access to the Earnings Reserve Account through a percent of market value (POMV) approach that allows the legislature to appropriate 5.25% of the market value of the Earnings Reserve Account for the years 2019-2021 (APFC, 2019). Appropriations from this account are used for the Permanent Fund Dividend a payment program for eligible Alaskans facilitating financial reimbursements in the form of dividends—and the state's spending needs (Brown & Thomas, 1994). In essence, the Principal is the sum of funds used for investing activities while the Earnings Account is used to provide the necessary cash flows in order to insulate the Principal as well as offer the state another source of income for its budgetary needs. Moreover, such a dual account system serves as a mechanism of assuring the APFC's fiduciary responsibility of preserving the income obtained from the state's petroleum activity for future generations of Alaskans is fulfilled.

Unlike many SWFs that derive their wealth from revenue-generating oil activities, the APFC releases yearly and quarterly fund performance as well as a range of supplementary documentation, or put simply it is comparatively rather transparent. Filings regularly issued by the APFC include but are not limited to summaries of board meetings, management fee reports, the fund's charters and bylaws, and externally audited financial statements. One such document that has great implications for the checks and balances of the organization is the APFC's Governance Manual, which outlines the structure of the Board of Trustees, committees within the Board of Trustees, the role of independent investment advisors, executive management, external investment consultants, external auditors, and other agents relevant to the fund's activities (APFC, 2017).

### 4. Roles and Duties of the Board of Trustees

Per the Governance Manual issued in 2017, the Board of Trustees is responsible for the oversight of the fund's operations as well as the formulation of relevant committees in order to facilitate these operations and the assurance that each component follows respective law, regulations, and policies. Six trustees are appointed by the Governor of Alaska—which is Governor Mike Dunleavy as of the date of this paper—two of which must be heads of principal departments of Alaska's government with one of the two holding the title of Commissioner of Revenue. The remaining four members of the Board of Trustees are general citizens with "recognized competence and wide experience in finance, investments, or other business management-related fields, " (APFC, 2017, p. 3). Agency problems are already bubbling to the surface and may be understood as such: the Governor is a publicly elected politician who is in part entrusted to appoint the best suited members of this Board of Trustees who are, in turn, entrusted by the Governor and Alaska citizens to act on their behalf in monitoring the actions of the APFC as the corporation directs the investments made using the funds in the APF. It is without a doubt that there are layers upon layers of principal-agent dynamics at play with regards to this quasi-independent state entity.

Under the provisions laid out by the Governance Manual, the Board of Trustees is responsible for governance issues such as setting policies and standards that would enable efficient operation of the APFC. Evaluating the Executive Director—essentially the APFC's chief executive officer—also falls under the Board of Trustees' purview and requires them to conduct at minimum an annual evaluation of the Executive Director. This plays directly into the second level of the agency dilemma mentioned above wherein the Governor of Alaska—the principal—delegates oversight of the APFC's executive team to the Board of Trustees—the agent. With regards to its oversight of investment activity, the Board is "required to exercise the judgment and care under the circumstances then prevailing that an institutional investor of ordinary prudence, discretion, and intelligence," (APFC, 2017, p. 3).

### 4.1. Internal and External Monitors

The APFC created a Governance Committee on February 23rd, 2010 in order to monitor the fund's organizational structure and ensure proper execution of policies, laws, and applicable regulations (APFC, 2017). The Board of Trustee's Vice Chair acts as the head of this committee and carry out necessary evaluations of the APFC's charters, proposing any changes they see fit in order to strengthen the SWF's adherence to high corporate governance standards. For the purposes of this paper, this committee is a vital component to the structure of the organization as it purely focuses on the governance aspect of this SWF. Notwithstanding its importance to the proper checks and balances that take place in the fund, its head is a member of the Board which raises the issue of an internal agent being charged to monitor the Board's behavior rather than an external agent holding that responsibility. Implications of

such a governance layout may lead to speculations of how strong this addition of a Governance Committee is and whether or not it keeps a watchful eye on the Board of Trustees.

A separate committee called the Investment Advisory Group (IAG) was established in the APFC's charters for the purpose of providing the Board with best practices for its investing activities. The IAG has at least one and at most three members, all of whom are "independent advisors to the Board of Trustees" and are appointed by the Board of Trustees as well, indicating another agency relationship in which the Governor entrusts the Board of Trustees to acquire the necessary investment acumen in order to fulfill the SWF's mission. Although there is a plethora of such principal-agent relationships throughout the structure of the APFC, it is important to note that the board of this SWF not only holds its own business knowledge but also enlists the services of a separate group of investing professionals to color the investment policies it issues. Moreover, there are numerous requirements for meetings to take place throughout the year between this advisory group and the board; it is fascinating to see such a structure laid out for the SWF since—despite ultimate policy creation being at the discretion of the Board of Trustees—there exists a system of checks and balances to monitor investment policies—and it is public information (APFC, 2019).

Aside from monitoring the APFC's investment strategies, the search and enlistment of an external auditor also falls under the duties of the Board of Trustees. the Audit Committee in particular, in order to ensure the accuracy of the financial information that the APFC discloses. Since 1978 when the APFC issued its first financial statement, the external auditor has held an important responsibility of monitoring the APFC. According to Ronen, the selection of an external auditor by a separate committee rather than executives of a corporation enlisting the services strengthens the role of the external auditor by enhancing their independence from management (Ronen, 2010). Given this reasoning, the APFC seems to be conducting their governance practices so as to ensure proper monitoring of management and its duty to disclose accurate financial information. In addition to the primary responsibility of the APFC's Audit Committee to select an external auditor, the committee must also "consist of at least three Trustees, each of whom must have a basic understanding of finance and accounting and be able to read and understand financial statements," (APFC, 2017, p. 7). As the Board of Trustees is meant to oversee and ensure well-functioning procedures for the disclosure of financial statements, the presence of knowledgeable professionals from applicable fields reassures the state legislature of the APFC's competency and ability to manage executives in their disclosures of public information. Understanding how these components of the Board come into play allows for a comprehensive view of the APFC's corporate governance structure and monitoring mechanisms.

### 5. Analysis & Conclusion

Today's increasing rate of SWFs and the immense foreign capital they carry beneath them raises concerns for investors as they are now in theory meant to monitor not only the Board of Directors in overseeing executives but also the actions of a new and large class of investors. While it may seem to create agency costs, it is more often than not found to be a case of passivity on both sides—the SWF and the shareholders—with regards to monitoring. In so much that SWFs have grown to be an important issue for today's conscious investors, it is imperative to comprehend the structure of these organizations and how governance impacts the directing of their immense pools of assets. Thus, it has been the focus of this paper to apply this analysis to the Alaska Permanent Fund and its overarching APF Corporation so as to better understand the governance system in place for the proper oversight of the APFC's management and execution of investment policies. Oil as natural resource is finite, and given Alaska's history of economic dependence on its oil reserves, future generations cannot practically rely upon the steady flow of revenues from oil digging activities. This then places the welfare of later generations of Alaska citizens in the hands of the APFC whose proper corporate governance is not only imperative for adherence to policies, laws, and regulations surrounding the entity but also the for future Alaskans themselves.

### References

- Alaska Permanent Fund Corporation. (2017). APFC Governance Manual 2017.
  - [PDF file]. Retrieved from
  - file:///Users/camerontaheri/Downloads/APFC-Governance-Manual-2017%20(1).pdf
- Alaska Permanent Fund Corporation. (2019). *Board Meeting Packets Governance Committee*. [PDF file]. Retrieved from
  - file:///Users/camerontaheri/Downloads/20190924-Governance-Committee.pdf
- Alaska Permanent Fund Corporation. (2019). *Guiding Principles*. [PDF file]. Retrieved from https://apfc.org/who-we-are/guiding-principles/.
- Alaska Permanent Fund Corporation. (2019). 2019 APFC Annual Report. [PDF file]. Retrieved from file:///Users/camerontaheri/Downloads/2019-APFC-Annual-Report.pdf
- Board of Trustees. (2019). *Monthly Performance Report*. PDF file. Retrieved from file:///Users/camerontaheri/Downloads/2019SEP30-APFC-Monthly-Performance-Report.pdf
- Brown, W. S., & Thomas, C. S. (1994). The Alaska Permanent Fund: Good Sense or Political Expediency? Challenge, 37(5), 38–44. doi: 10.1080/05775132.1994.11471770
- Firzli, M. Nicolas J., and Joshua M. Franzel. (2014). Non-Federal Sovereign Wealth Funds in the United States and Canada: Public Asset Accumulation and

- Investment in Developed Economies. (Original Publishing: Revue Analyse Financière, No. 52). Retrieved from SSRN: https://ssrn.com/abstract=3166671
- Lynch, Donald, and Maynard M. Miller. Alaska. (2019). In *Encyclopaedia Britannica online*. Retrieved from https://www.britannica.com/place/Alaska
- Legal Information Institute. (2019). "17 CFR § 160.3 Definitions." Legal Information Institute. Retrieved from https://www.law.cornell.edu/cfr/text/17/160.3.
- Paul Rose. (2008). "Sovereign Wealth Funds: Active or Passive Investors?," 118 YALE L.J. POCKET PART 104. Retrieved from http://thepocketpart.org/2008/11/24/rose.html.
- Ronen, Joshua. (2010). "Corporate Audits and How to Fix Them." The Journal of Economic Perspectives 24, no. 2: 189-210. Retrieved from www.jstor.org/stable/25703507.
- Rozanov, Andrew. (2005). "Who Holds the Wealth of Nations?," Central Banking Central Banking Publications. Retrieved from https://www.centralbanking.com/central-banks/financial-stability/2072255/who-holds-the-wealth-of-nations.

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