AUMUN'S '26

STUDY GUIDE

UNDER SECRETARY GENERAL: MUSTAFA ASLAN

ACADEMIC ASSISTANT: CAGIN ORKAN BENZEŞ

FIA

FIA

Agenda item: Governance And Regulatory Reforms in Formula 1

Under Secretary General: Mustafa Aslan
Academic Assistant: Çağın Orkan Benzeş

1.Letter from the Secretariat

Letter from Secretary-General

Honourable participants,

First order of business, I would like to welcome you all with open arms and utmost gratitude for attending our conference. I truly hope you can find a little solace and comfort with your peers here, as our conference and team truly care about you and we will be trying our best to accommodate you.

I would also like to remind you that we intend to keep everyone involved in a place of safety, and comfort. As we all witnessed the last events in our country, I can promise that those who act out of order will be taken care of and thrown out of the conference immediately.

As the Secretary-General, I offer you a variety of global problems to work on and create solutions accordingly, as it is what boils down to with every Model United Nations conference around the globe. I truly hope this will be a place where you can learn and grow both intellectually and personally. You are in a place where you will be heard, valued, and supported.

What I offered is only possible with an academic team like this, so those who I have in my team should know that I offered their positions accordingly, and knowingly. I expected the best, which they gave in return. I am truly grateful for everyone in my team, and I know for a fact that also our delegates will feel the same way I do.

Those who will be attending a conference for the first time, I hope our conference will get you hooked on MUN conferences and make you expand your horizon as much as you can in order to become a better version of yourselves in every possible area that we can offer. Attending a conference where everyone is your peer might be a little overwhelming but rest assured, me and my academic team, will be here to ensure your careers as MUNers will begin smoothly, and in any occasion that might make you uncomfortable in or outside of our formal sessions, I truly have the greatest organization team that ever existed, so you can rely on them as much as you can rely on me.

I also would like to extend my special thanks to my executive team, Ekin Su Öztürk and Emir Güneş, who gave their incredible efforts to ensure our organization team is spotless, in and out of our conference. Also, Mert Sürücü, for sticking with me throughout this almost five year old journey of MUNing, with an unbelievable amount of ups and downs, and yet we are still here.

I truly can not wait to see you all in AUMUN’26.

Truly yours,
Bedirhan CURA
Secretary General

2. Letter from the Under Secretary General

Dear Participants,

First of all, I would like to welcome you all to the AUMUN FIA committee.
I am Mustafa Aslan, I'm a senior at Bahçeşehir High School, and I am honored to serve as the Under Secretary General of the committee.

I have been attending Model United Nations conferences in Antalya and many other cities for the last three years and this is my 33rd conference.

I would like to thank the secretariat, especially Bedirhan Cura. And also I would like to thank the rest of the executive team for organizing this conference and my special thanks to my handsome Academic Assistant Çağın Orkan for his dedicated efforts.

If you have previously participated in one of my committees, I generally make special committees. If you have not participated in my committees or a special committee before, there is no need to be nervous. The entire guide was written to ensure this for you.

Since this is my area of expertise, my committees are usually focused on political diplomacy, but this time we're doing the exact opposite. I've been looking forward to sharing this committee with you for the past year, and I assure you, you'll enjoy it even more than any of the special committees you've participated in before.

Besides these, if you have any questions about the committee, please contact me from my contact information below, even for the tiniest thing you want to ask.
We have added all the necessary information in the committee to the study guide as an academic team.
I wish you all success in advance.

Under Secretary General, Mustafa ASLAN

aslanmustafa0770@gmail.com

3.Letter from the Academic Assistant

Hello everyone! Get ready to watch an amazing race tonight. I'm your commentator, Çağın Orkan Benzeş.

I am an 11th-grade science student at Kırmızı çizgi Science High School, and I am experiencing great pride and joy in being an academic assistant on this conference and this committee.

First of all, I would like to extend my respect and love to Mustafa. He worked very hard for this committee. Secondly, I would like to thank Bedirhan for enabling us to form such a committee at this magnificent conference.And I send my deepest respects to the rest of the Aumun'26 executive team.

Finally, there's something I want you to know. I want to assure you that I will do everything in my power to ensure your enjoyment and to foster your love for Formula 1. I only ask that you carefully examine the old regulations I've provided here, thoroughly research what you can do under them, and consider how these regulations are discussed, both legally and between other teams.If you have any questions, you can contact me directly. See you on the day of the conference.

Academic Assistant
Çağın Orkan Benzeş

cagin.o.b@gmail.com
Tel number:0 546 225 05 65

4.What is F1?

*F*ormula 1 (also known as Formula One or F1) is the highest international racing series for single-seater open-wheel cars, sanctioned by the International Automobile Federation (FIA).

The FIA Formula 1 World Championship has been one of the leading forms of racing worldwide since its inaugural season in 1950. The word "formula" in its name refers to the set of rules that all participating cars must adhere to. A Formula 1 season consists of a series of races known as Grand Prix. Grand Prixes take place on circuits or public roads in many countries and continents around the world.

A points system is used to determine the two-year World Championship in the Grand Prix: one for drivers and one for manufacturers (teams). Each driver must hold a valid FIA Super License, the highest class of racing license granted by the FIA. Races must be held on circuits rated "1," the highest rating given by the FIA for circuits.

F1 consists of races throughout the year, each called a Grand Prix, held on dedicated circuits in different countries. At the end of the year, the Drivers' Championship and the Manufacturers' Championship (Automobile Manufacturers' Championship) are awarded based on the accumulated points.

The races are organized by the FIA (International Automobile Federation), chaired by Mohammed bin Sulayem. While the majority of F1 races have historically been held in Europe, in recent years an increasing number of races have been moved outside of Europe. The main reason for this is the FIA's desire to open up to new, developing markets, but the attractiveness of countries where regulations are not as strict as in EU countries has also played a role. In recent years, the ban on tobacco advertising at EU races for health reasons, and the investigation of some fatal accidents by local prosecutors (to determine whether they were due to negligence by the teams), have not been well received by the FIA. It is one of the

most watched sports in the world. In 2010, it reached 527 million television viewers worldwide.

The Formula 1 car is the world's fastest regulated road racing car, thanks to its very high cornering speeds achieved by generating large amounts of aerodynamic downforce. Much of this downforce is generated by the front and rear wings, which have a side effect causing severe turbulence behind each car. This turbulence reduces the downforce generated by cars directly behind, making overtaking difficult.

Major changes to the cars for the 2022 season made greater use of ground-effect aerodynamics and modified wings to facilitate overtaking and reduce turbulence behind the cars. Cars are dependent on electronics, aerodynamics, suspension, and tires. Traction control, launch control, advanced driver assistance systems, automatic gear shifting, and other electronic driving aids were first banned in 1994. They were briefly reintroduced in 2001 and more recently banned again from 2004 and 2008 respectively. Financial and political battles are widely reported, as the average annual cost of running a team (designing, building and maintaining the cars, paying, transportation) is approximately £220,000,000 (or $265,000,000). On January 23, 2017, Liberty Media acquired Formula One Group from private equity firm CVC Capital Partners for £6,600,000,000 (or $8,000,000,000).

4.1 History of Formula

Formula 1 racing has its origins in the European Grand Prix motor races held in the 1920s and 1930s. Formula 1 is the set of rules that all participants and cars must adhere to. Formula 1 is the name given to the new rules agreed upon in 1946 after World War II. Before the war, many Grand Prix races were organized for the World Championship, but the World Drivers' Championship was not formalized until 1947. The first world championship race was held in 1950 at the Silverstone circuit in England. The manufacturers' championship began in 1958. National championships were held in South Africa and England during the 1960s and 1970s. Non-championship Formula 1 races were held for many years, but due to increasing costs, the last one was held in 1983.

The return of the races (1950-1958)

The first Formula 1 World Championship, the 1950 season, was won by Italian Nino Farina of Alfa Romeo (Formula 1). He narrowly beat his Argentinian teammate Juan Manuel Fangio to take first place. Despite this, Fangio went on to win the 1951, 1954, 1955, 1956, and 1957 seasons, a streak that was eventually interrupted by two-time world champion Alberto Ascari of Ferrari. While Stirling Moss of Britain regularly competed, he never won the World Championship and remains considered the greatest driver to have achieved this feat. Fangio is remembered as the dominant figure in Formula 1's first decade, and for a long time he was referred to as the "grandmaster" of Formula 1.

This period was dominated by road car manufacturers – Alfa Romeo, Ferrari, Mercedes-Benz, and Maserati – all of whom were racing before the war. The early seasons featured pre-war cars like Alfa Romeo's 158. These were front-engined cars with narrow-troweled tires and either 1.5-liter supercharged or 4.5-liter naturally aspirated engines. The 1952 and 1953 Formula 1 world championships were run under Formula Two rules, designed for smaller and less powerful cars, due to concerns about the limited number of Formula 1 cars available. When Formula 1 introduced the 2.5-liter engine limit in 1954, Mercedes-Benz unveiled the improved W196. This car featured innovations such as desmodromic valves and fuel injection, as well as a chassis design incorporating airflow lines. Mercedes won the drivers' championship for two years before withdrawing from all motorsport after the 1955 Le Mans disaster.

Garagistes' (1959 - 1980)

The first major technological advancement was Cooper's mid-engine cars. This car was developed from the company's successful Formula 3 design. Australian Jack Brabham, the 1959, 1960, and 1966 Formula 1 World Champion, quickly proved the superiority of this new design. From the 1961 Formula 1 season onwards, all competitors switched to mid-engine cars.

The first British World Champion was Mike Hawthorn, who led the Formula 1 season with Ferrari in 1958. However, with Colin Chapman's entry into F1 as a chassis designer and later

the founding of Team Lotus, BRG dominated the circuits for the next decade. Between Jim Clark and Jackie Stewart, John Surtees, Jack Brabham, Graham Hill, and Denny Hulme, British teams and drivers won twelve world championships between 1962 and 1973.

In the 1962 Formula 1 season, Lotus entered a car using an aluminum monocoque chassis instead of the traditional skeleton design. This was claimed to be the biggest technological advancement since the development of mid-engined cars. In the 1968 Formula 1 season, Lotus painted the Imperial Tobacco emblem on their cars, marking the company's entry into the sport as a sponsor.

Towards the end of the 1960s, with the advent of winglets, the importance of aerodynamic downforce in car design increased significantly. By the end of the 1970s, Lotus incorporated ground-effect aerodynamics into its car, providing immense downforce and greatly increased cornering speed. These incredible aerodynamic forces push the car onto the racetrack with up to 5”g”.

(1981-2000)

1981 was the year the first Concorde Agreement was signed. This agreement obligated teams to compete unless they went bankrupt, and also gave them a share of the revenue from television broadcasting rights. It ended the FISA-FOCA war, handing over complete financial control of the sport to Bernie Ecclestone.

The FIA imposed penalties for ground-effect aerodynamics in the 1983 Formula 1 season. Despite this, turbocharged engines, pioneered by Renault in the 1977 Formula 1 season, produced over 700 bhp and were considered a necessity for competitiveness. In subsequent years, particularly in the 1986 Formula 1 season, Formula 1 turbo cars produced 1,100 bhp (820 kW) during races (and especially 1,400 bhp / 1,050 kW in qualifying). These cars were the most powerful track racing cars ever made. To reduce engine power output and thus speed, the FIA limited the size of fuel tanks in the 1984 Formula 1 season and imposed restrictions on engine booster systems in the 1988 Formula 1 season. In the 1989 Formula 1 season, it completely banned turbocharged engines.

In the early 1990s, teams began using electronic driver aids such as active suspension, semi-automatic gearboxes, and traction control. Some of these inventions were adopted and used by modern road cars. The FIA, noting that technology was becoming more influential than drivers in race results, banned many of these electronic aid systems in the 1994 Formula 1 season. However, many observers believe that these bans on driver aids only applied to the names of the systems. The FIA lacked any technological means or methods to remove these applications from racing.

Teams signed a second Concorde Agreement in 1992 and a third in 1997. This final agreement expired on the last day of 2007.

McLaren and Williams dominated the 1980s and 1990s. During this period, McLaren, supported by engines from Porsche, Honda, and Mercedes-Benz, won 16 championships (seven constructors' and nine drivers'), while Williams, using Ford, Honda, and Renault engines, also won 16 championships (nine constructors' and seven drivers'). The rivalry between legendary drivers Ayrton Senna and Alain Prost became a central theme of Formula 1 in the 1988 season and continued until Prost's retirement after the 1993 Formula 1 season. Tragically, Senna died in a crash at the 1994 San Marino Grand Prix. Following that weekend, in which Roland Ratzenberger also lost his life during Saturday qualifying, the FIA began working to improve the sport's safety standards. Since that day, no driver has lost their life behind the wheel of a Formula 1 car until the 2014 Japanese Grand Prix (Jules Bianchi).

The deaths of Ayrton Senna, Roland Ratzenberger, and Gilles Villeneuve provided a significant justification for the FIA to implement safety rule changes. This also required the approval of all teams under the Concorde Agreement. As part of these safety measures, cars with smaller rear wheels were developed, coinciding with the "narrow track" era. Additionally, grooved tires were designed to reduce mechanical grip. These tires must have a total of four grooves on both the front and rear wheels. The aim of this regulation is to reduce cornering speeds and make race conditions more natural by reducing the contact surface

between the tire and the track. This approach is considered a system that better rewards driver skill.

Christijan Albers' Minardi PS05 at the 2005 Canadian Grand Prix

Even the lack of mechanical grip led designers to try to compensate for this deficiency with aerodynamic grip – such as applying more force to the wheels with the help of wings.

Alex Wurz at the 1997 British Grand Prix. More innovative teams found other ways to maximize this dramatic change. McLaren, in a car designed by Adrian Newey, developed a system that allowed the right and left wheels to brake separately. This allowed them to take corners much faster. This invention was also perceived as driver assistance and was banned.

Drivers from McLaren, Williams, Renault (formerly Benetton), and Ferrari form the "Big Four." They have won every world championship from the 1984 Formula 1 season to the present. Due to technological advancements in the 1990s, the cost of racing in Formula 1 increased significantly. This increasing financial burden, combined with the dominance of the four big teams (large car manufacturers with ample funds such as Mercedes-Benz (DaimlerChrysler)), not only affected the competitiveness of poorer independent teams but also led to their inability to remain in the industry. Financial difficulties affected some teams.

The Return of the Producers (2000-2008)

Between 1999 and 2004, Michael Schumacher and Ferrari won an unprecedented five consecutive drivers' championships and six consecutive constructors' championships. Schumacher broke many new records, including the number of Grand Prix wins (91), the number of wins in a single season (13 out of 18 races), and the driver with the most

championships (7). In the 2003 season, Raikkonen missed the world championship by 2 points. In 2004, Ferrari was again unrivaled. Schumacher's championships ended on September 25, 2005, when Renault driver Fernando Alonso became the youngest Formula 1 champion. The 2005 season was full of excitement with the rivalry between Kimi Raikkonen and Fernando Alonso. In 2006, Renault and Alonso won the championship again. Seven-time World Champion Schumacher announced his retirement at the end of the 2006 Italian Grand Prix after 16 years in Formula 1. The 2007 season was a whirlwind of excitement, with Raikkonen winning the championship in the final race with 110 points, ahead of the two McLarens with 109 points, but the season was marred by a spying scandal. In 2008, Lewis Hamilton won the championship by just one point.

Throughout this period, the championship rules were frequently changed by the FIA to improve on-track competition and reduce costs. Team orders, legal since the championship's inception in 1950, were banned in 2003 after numerous incidents involving teams openly manipulating race results, creating negative public opinion. The most famous of these incidents occurred at the 2002 Austrian Grand Prix, perpetrated by Ferrari. Other changes included the qualifying format, the scoring system, technical regulations, and rules governing the usage periods of engines and tires. Although the battle between tire suppliers Michelin and Bridgestone reduced lap times, some teams claimed the tires were unsafe at the 2005 American Grand Prix in Indianapolis. At the end of 2006, Max Mosley outlined a “green” future for Formula 1, and from then on, energy efficiency became a key factor. Since 1983, Formula 1 races have been dominated by specialist racing teams such as Williams, McLaren, and Benetton. These teams use engines from major car manufacturers such as Mercedes-Benz, Honda, Renault, and Ford. In 2000, with Ford's highly unsuccessful project, Jaguar Racing, new manufacturer teams began entering Formula 1 for the first time since Alfa Romeo and Renault entered the races in 1985. As of 2006, manufacturer teams – Renault, BMW, Toyota, Honda, and Ferrari – dominated the championship, taking five of the top six positions in the constructors' championship. The only exception was McLaren, partnering with Mercedes-Benz. Through the Grand Prix Manufacturers Association (GPMA), they have received a larger share of Formula 1's commercial profits and have had more say in the future of the sport.

Today, the terms "Formula 1 race" and "World Championship race" mean virtually the same

thing in practice; since 1984, every Formula 1 race has been a World Championship qualifying race, and every World Championship race has been run according to Formula 1 rules. This wasn't always the case. In Formula 1's earlier days, many other races were held besides the World Championship.

5.What are F1 regulations and what do they mean?

First, we need to understand the basic logic of F1 regulations. These regulations involve modifying engine power, aerodynamics, weight, and mechanical handling. Engineers strive to produce the best possible optimized car within these rules. Deviating from these regulations can result in penalties, which we will discuss in later sections. Regarding engine regulations, details such as the 1.6L V6 turbo hybrid engine, fuel flow limits, and energy recovery are included. Technically, this means that pure horsepower is not present in races; therefore, the concept of thermal efficiency is paramount in Formula 1.

As a result, engineers try to increase combustion efficiency and then optimize energy recovery. Secondly, there are aerodynamic regulations. These rules include limitations on wing sizes and create ground effect-mandated designs. Technically, one of the aims is not maximum downforce, but the best possible downforce and drag ratio. If downforce is too high, slowdowns occur on the straights, while low downforce can cause problems. Downforces create a risk of skidding in corners.

SSThen there are tire regulations. In Formula 1, tires are definitely not customizable, and Pirelli is the sole manufacturer. The aims here are to ensure good suspension geometry, heat management, and wear control. Weight and size limits are specified in the rules, with minimum vehicle weight and maximum width and length. Technically, weight distribution

becomes extremely important, and millimeter-precise operations are performed in chassis design. Following these are energy and fuel limitations. The rules here are strict and simple; a maximum of 110 kg of fuel can be used, while there are also energy efficiency limits.

Technically, energy management here is equivalent to performance. We understand that speed is not the only important factor; it also highlights when energy is used and when it is stored. Finally, there is a consumption limit. The problem here is the lack of endless R&D, and it's a regulation that forces engineers to focus on the area that yields the greatest profit. These can be achieved through simulations, data analysis, and efficiency engineering.

Generally speaking, the goal is to achieve maximum performance while implementing all these features, but due to limitations in power, aerodynamics, fuel, and budget, achieving all of this is a major challenge. The clearest technical definition here is that F1 regulations, by placing limits on certain physical variables, force engineers to tackle problems of maximum efficiency.

5.1 Changes in regulations over the years

Despite several near misses (especially during the turbo era), Formula 1 managed to go almost 12 years without a single fatality at race meetings. The robustness of the carbon fiber chassis used, and the fact that many drivers involved in high speed crashes during this period miraculously survived, led many within the sport to believe that death in Formula 1 was a thing of the past. This attitude began to seem foolish when the FIA hastily banned almost all performance enhancing electronic technology that teams had become reliant on at the start of the 1994 season. This made many of the cars that year frustrating and unstable to drive. With more power but less stability than in 1993, some observers (particularly Ayrton Senna) stated at the time that they believed 1994 would be "a season with many crashes."

The near fatal crashes of JJ Lehto and Jean Alesi during pre season and in-season testing proved Senna right. This situation culminated in the disastrous 1994 San Marino Grand Prix, where Brazilian Rubens Barrichello was seriously injured in a crash during Friday's practice session. This set the stage for further catastrophic events throughout the weekend, including

the fatalities of Austrian driver Roland Ratzenberger and Senna himself; all three crashes occurred on consecutive days. The extensive changes implemented by the FIA after Imola were as hasty as those at the end of 1993, nearly resulting in Pedro Lamy's death in a test crash. Lamy's crash was attributed to a rear wing failure; a consequence of the FIA hastily enacting new rules, one of which reduced the size of the rear diffuser and thus the number of anchor points available for an attached rear wing assembly.

It is fair to say that the FIA learned from its mistakes in 1994 and has since applied much greater care and forward thinking to rule changes. Towards the end of the decade, a measure of the impact of the 1994 San Marino Grand Prix on the sport was that, for the first time in its history, safety became Formula 1's number one concern.

1990

Larger mirrors and a quick-release steering wheel were made mandatory; all officials and medical personnel had to perform driver rescue drills.

1991

The front wing was narrowed from 150 cm (59 in) to 140 cm (55 in). The rear overhang was reduced from 60 cm (24 in) to 50 cm (20 in). More rigorous testing of the survival cell by the FIA, including seatbelts, fuel tanks, and the roll bar. The scoring system was revised; a win now awarded 10 points, and all results counted instead of just the top 11 points.

1992

More extensive testing of the survival cell was carried out, including rear-impact tests. Curb height was reduced, minimum pit lane width was increased to 12 m (39 ft), pit lane entry chicane was made mandatory, and a safety car was deployed.

1993

Rear tire width was reduced from 18 inches (457 mm) to 15 inches (381 mm) to reduce grip and thus car speed, overall car width was reduced from 220 cm to 200 cm, rear wing height was reduced from 100 cm to 90 cm, distance of front end plates from flat bottom was increased from 25 mm to 40 mm (0.98 to 1.57 in), headrest area was increased from 80 to 400 cm^2 (12 to 62 in^2). Continuously variable transmissions (CVTs) were banned before appearing in a race. Crowd control measures were implemented at the end of the race, and a 50 km/h speed limit was imposed in the pit lane during free practice. The fuel used was

limited to the fuel available to the general public. Drivers were limited to 12 laps in both qualifying sessions; the maximum number of cars on the grid was set at 25 (later increased to 26 from the German Grand Prix onwards).

1994

At the start of the season, electronic driver aids such as active suspension, traction control, launch control, ABS and (unseen in any race) four wheel steering were banned; mid race refueling was allowed for the first time since 1983; with the return of refueling, pit crews were now required to wear fireproof racing suits. [Parade lap to be completed behind the safety car (abandoned from Imola onwards). : After Imola, extensive changes were introduced from Monaco onwards to slow down the cars. Pit lane speed limit was implemented; Between the Spanish and German Grand Prix, additional changes are introduced gradually, including a 10 cm reduction in rear wing height, an increase in front wing height, the prohibition of front wing support assemblies extending behind the front wheels, and the installation of a 10 mm wooden skid block on the subframe (allowing for a maximum wear of 1 mm by the end of the race).The changes include: banning high rear wing assemblies extending beyond the rear axle line to avoid wing height restrictions; reducing engine airbox pressure to decrease power; introducing a minimum headrest thickness of 75 mm (3.0 in); implementing stricter fire extinguisher regulations and driver helmet criteria; changing the pit lane speed limit to 80 km/h (50 mph) in practice and 120 km/h (75 mph) in race conditions; and fire protection of the pit spectator area. 27 corners on the track have been identified as very high risk; changes have been made to the track layouts to remove or modify these sections.

(The text then mentions changes to track layouts, but this is incomplete and should be omitted.) 1995

To further reduce vehicle speed, engine displacement was reduced from 3,500 to 3,000 cc (214 to 183 cu in), longer and higher cockpit openings were made to reduce the likelihood of a head injury to the driver in an accident, survival cell side impact tests were introduced, automatic neutral gear selection was made mandatory when the engine stopped, the chassis length in front of the driver's feet was increased from 15 cm to 30 cm (5.9 to 11.8 in), the frontal impact test speed was increased from 11 m/s to 12 m/s, curbs were made flatter, pit wall debris shields were installed, 3-inch seatbelts were made mandatory, Super License criteria and fuel restrictions were further tightened (i.e., special racing fuels, previously an

exotic mixture of benzene and toluene, were banned; only those with properties similar to everyday unleaded gasoline were allowed). 1996

The cockpit protection around the driver's head was increased, the front wing endplates were not to be thicker than 10 mm to reduce damage to other vehicles' tires in the event of a collision, all seatbelt release levers were positioned to face downwards. All cars now need to be within 107% of their pole position time to participate in the race, car numbers are now assigned based on the previous season's performance, Friday qualifying was eliminated, the number of free practice sessions was increased from two to three, the number of laps allocated each day was increased from 23 to 30, all FIA safety cars and medical vehicles were standardized, more fire drills were conducted for officials, the starting procedure was improved, and the data storage unit was to be mounted in the survival cell.

1997

Test tracks now require FIA approval and inspection, curbs are standardized, bolted tire walls are mandatory, cars must carry an FIA accident data recorder (ADR) to analyze the success of implemented safety measures, all chief medical officers and medical centers require FIA approval, the safety car is made more powerful and can now be used in wet weather starts, the accident response plan is revised.

1998

The narrow track era begins in Formula 1; the width of the car is reduced from 2 meters to 1.8 meters. Teams now use 14 mm grooved tires to reduce speed (4 at the rear, 3 at the front), asymmetric braking is banned, X-wings are banned mid-season, a single fuel tank is mandatory, the refueling port must be closed, cockpit dimensions are increased, the side impact test will now use 100% more energy, tire barrier effectiveness is increased, the pit lane must now have a 100 m straight before the first pit garage, the use of pit lane lights next to the flags is increased. 1999

The number of grooves on the front tires was increased from 3 to 4, flexible wings were banned, pit lane protection was standardized, asphalt was to be used instead of sand traps in some run-off areas, at least four medical vehicles and one FIA doctor's car were made mandatory, FIA accident data recorders (ADR) had to be operational during testing, wheels had to be attached to the vehicle to reduce the risk of debris flying off during an accident, rear and side headrest assemblies were made onepiece and quickremovable, engine oil vents were to be vented to the engine air intake, a removable driver's seat was mandatory, and the frontal impact test speed was increased to 13 m/s.

By the late 1990s, safety standards had risen significantly for the second time in 20 years. Accidents at the Italian and Australian Grand Prix in 2000 and 2001, respectively, where officials lost their lives due to wheel-on collisions, showed that the sport would never be completely safe, but overall, it was in a much better state in terms of safety than before. Aside from the introduction of the HANS (head and neck support) system in 2003, there hadn't been a major safety improvement in the sport from the beginning of the millennium until the introduction of the halo system in 2018.

Many of the changes the FIA made to the regulations in the nine seasons since 2000 aimed to reduce car speeds and subsequently lower costs in Formula 1 over the following decade. These costs increased three to four times for top teams like Ferrari and McLaren. This sudden increase in budget stemmed from car manufacturers establishing teams, making huge expenditures in the sport, since Mercedes-Benz's purchase of 40% of the McLaren team.

By 2008, as the global credit crisis had fully transformed into a global recession, many car manufacturers (whose sales had been severely impacted by the economic crisis) could no longer recoup the enormous sums they had invested in the sport. The seriousness of the situation was evident when Honda abruptly withdrew from the sport at the end of the 2008 season, later confirming the sale of the team and blaming the global economic crisis. With Toyota and BMW also withdrawing at the end of the following year, the remaining manufacturers and the FIA agreed to make changes to the rules in subsequent seasons to prevent the sport from collapsing under the weight of its own costs.

2000

It was made mandatory for engines to be V10 engines with a displacement of no more than 3000 cc. The red flag procedure was changed; races were restarted with the cars on the grid according to their position at the end of the lap before the red flag; only the race order and the number of laps completed were considered for the new race. Time differences between cars are considered invalid; the distance of the new race is found by subtracting three laps from

the remaining laps of the original race. The use of chilled fuel was banned mid-season.

2001

Traction control was allowed again from the Spanish Grand Prix, as the FIA acknowledged that it could not monitor whether teams were effectively using the system to gain a competitive advantage; fully automatic transmissions and launch control were also prohibited. The use of beryllium alloys in chassis or engine construction was banned. The size of the cockpit entry template and survival cell was increased. A maximum of 3 elements could be present on the rear wings. 2002

Team orders were banned mid season after Rubens Barrichello gave victory to Michael Schumacher in the final corner of the Austrian Grand Prix. Electronic power steering was banned.

2003

Two way telemetry was banned, HANS (Head and Neck Support) system was mandatory. Points system changes: points are now awarded up to 8th place, with 10, 8, 6, 5, 4, 3, 2, 1 points awarded from 1st to 8th place. Testing was allowed on Friday of the race meeting in exchange for a reduction in the permitted test distance outside the Grand Prix calendar, making it more suitable for smaller teams. Changes to the qualifying session: only one fast lap is now allowed for grid position, and the 107% rule no longer applies. Cars cannot refuel between the final qualifying session and the start of the race.

2004

Engines had to last the entire race, and any engine change would result in a 10-place grid penalty. The minimum weight for qualifying was set at 605 kg (1,334 lb), and at all other times (including driver and fuel) it could not be less than 600 kg (1,300 lb). Pit lane speed was always limited to 100 km/h, each driver had to choose wet and dry tire compounds before the start of the race, the minimum size of the engine cover and rear wing endplates was increased to maximize advertising space, multi-element rear wings were banned and two-element wings were made mandatory. Launch control was banned for the second time, along with fully automatic transmissions. The rear overhang was increased from 50 cm (20 in) to 60 cm (24 in), reverting the 1991 change.

2005

The rear diffuser size was reduced to limit downforce, and all engines now have to withstand two race weekends. The qualifying format was changed to Saturday afternoon and Sunday morning total times to count towards grid positions (this format continued until the European Grand Prix, where qualifying reverted to the driver's fastest single lap from Saturday afternoon qualifying). Further changes were made to the dimensions of the front and rear wings and the car's nose to facilitate overtaking, and restrictions were placed on tire changes during qualifying and the race. If a driver stops on the grid after a parade, the other cars will now complete a second lap while the stopped car is removed. In the event of a red flag, the two hour race clock will no longer freeze between race sessions. 2006

Only 14 sets of tires were allowed throughout the weekend (seven dry, four wet and three extreme wet), tire changes were again allowed during the race, the qualifying format was converted into three 15 minute elimination laps; the slowest cars were eliminated in the first two sessions, so the fastest 10 cars competed for pole position with a clean start (the final session was reduced from 20 minutes to 15 minutes from the French Grand Prix onwards). The Saturday free practice time was increased from 45 minutes to 1 hour. Engine design was limited to 2400 cc 90 degree 4 valve V8s to reduce horsepower (however, teams were allowed to temporarily use a rev-limited V10 if a suitable engine could not be found under the new regulations), and restrictions were placed on the use of non-ferrous materials in engine construction. 2007

Tuned mass damping system was banned, a 19,000 rpm rev limit was introduced, rear wing structure was strengthened to prevent flexing, and increased rear crash structure strength was required. Following Michelin's withdrawal, Bridgestone became the sole tire supplier. Revised tire regulations required drivers to use both hard and soft compound tires throughout a race (soft compound tires are identified by a white stripe in one of the front tire grooves), engine development was frozen until the end of 2008 to reduce costs, additional restrictions were introduced to the regulations meaning no team could use a third car on Friday, both Friday sessions were extended to 90 minutes, engine changes on the first practice day were no longer subject to grid place penalties, pit lane restrictions applied for any time the safety car was on track, and annual testing was limited to 30,000 km to reduce costs.

Traction control was banned for the second and final time through all teams using a standard electronic control unit (ECU), thus eliminating the possibility of teams hiding the technology in their own engine management systems. Strict limits were placed on the amount of CFD and wind tunnel testing allowed each year. 2009

The banning of almost all aerodynamic devices except the front and rear wings, the reintroduction of slick tires (provided compliance with narrow track dimensions is maintained), the introduction of a limit of eight race/qualifying engines for the entire season (each new engine after that results in a 10 place grid penalty), and the reduction of the rev limit to 18,000 rpm. The rear wing width was reduced from 1000 mm to 750 mm and its height increased from 800 mm to 950 mm, the front wing ground clearance was reduced from 150 mm to 50 mm and its width increased from 1400 mm to 1800 mm. The rear diffuser was made longer and higher, variable front aerodynamic devices were allowed (with limited in-car control by the driver), and KERS (kinetic energy recovery system) was introduced, which temporarily converts the energy generated during braking into a power boost of approximately 80 bhp and can be used by drivers for overtaking for 6.6 seconds per lap. The pit lane is no longer closed when the safety car is deployed. Mid-season testing is banned.

2010s

Previous regulatory changes aimed at improving the show in the late first decade of the new millennium had largely failed. While cost growth has been largely brought under control thanks to recently implemented budget caps, source needs and safety standards are at an all time high, the sport’s focus in the new decade has been to continue improving the show. However, the medium-term goal was to make the sport more environmentally friendly, both to secure its future in an era of dwindling fossil fuel reserves and to attract new sponsors who steered clear of the sport's flashy consumer image.

2010

Significant cost-cutting measures were introduced. The in-race refueling ban was reinstated; consequently, fuel could be added to any F1 car after qualifying, but Q3 drivers had to start the race on the tires with which they achieved their fastest Q3 times. The same 8 engine limit was maintained despite the increase to 19 races throughout the season.

(The limit is still at 18,000 rpm). Front tire width was reduced from 270 mm (11 in) to 245 mm (9.6 in). An agreement was reached to reduce the number of personnel working with the teams. 3 new teams, meaning 7 drivers are now excluded from Q1 and Q2. The scoring system was changed to allow the top ten cars to score points: 25, 18, 15, 12, 10, 8, 6, 4, 2, 1.

Cars behind can no longer get themselves out of a lap behind the safety car. Teams unanimously decided not to use KERS in the 2010 season to allow time to develop and perfect their own systems. 2011

The dual diffuser concept was banned, and teams began using simpler, single-piece diffusers. The "F-channel" system developed by McLaren was banned, shark fins attached to the rear wing were banned, and adjustable front wings were banned. Transmissions are required to last for 5 race weekends, but each driver has one penalty-free (i.e., "wildcard") transmission change throughout the season. The 107% rule was reintroduced following concerns about the speed of new teams. Teams agreed to reintroduce KERS, provided that the minimum car weight is increased by 20 kg (44 lb) to offset the weight of the KERS device. Sporting regulations were amended to clarify procedures during the final lap safety car and qualifying. Drivers were warned to set an example for public road safety following Lewis Hamilton's suspension after the 2010 Australian Grand Prix; FIA President Jean Todt is proposing a policy similar to the NFL Personal Conduct Code for suspension or revocation of racing licenses. The ban on team orders was lifted (although the FIA may use the reputation clause in case of abuse): A driver-adjustable drag reduction system (DRS) rear wing element was introduced to assist with overtaking; DRS can be used freely in practice and qualifying, but is limited during races to specific "activation zones" on the track and only when within 1 second of the next car by the "detection zone". The DRS wing must close immediately during braking and DRS must be deactivated in the first 2 laps of each race or when the track is declared wet.

2012

Following the controversy surrounding "blown diffusers" at the 2011 British Grand Prix, exhaust pipes were raised and car noses were reshaped. Reactive suspension systems, "exotic" engine maps and the use of helium in air guns (for changing tires) were banned. Cars must have passed all crash tests before preseason testing. Following the lengthy red flag practice at the 2011 Canadian Grand Prix, races were limited to four hours (including red flags). In season testing was again permitted at a track chosen by agreement between the FIA or the teams (Mugello Circuit in 2012). The cars behind can recapture their lap times behind the safety car.

2013

Further cost cutting measures were introduced, DRS was restricted to designated areas in free practice and qualifying, mid season testing was stopped once again, "privacy panels" were

introduced to compensate for the previous year's front nose refill, dual DRS (led by Mercedes) was banned, and the minimum weight was increased to 642 kg (1,415 lb).

2014

A new turbocharged 1600 cc V6 engine formula was introduced with an 8 speed gearbox, which now needs to withstand at least 4,000 km (2,500 miles) before needing to be replaced, and KERS (now known as MGU-K) is integrated. A new penalty point system was introduced, teams had to choose eight gear ratios before the first race, rear wing spars and dummy camera mounts were banned, the top 10 drivers now had to start the race with the tires that gave them their best Q2 times, in-season testing returned, and car noses were further re-profiled. A new car numbering system was adopted where drivers could choose their own number throughout their careers. Double points were awarded for the final race of the season.

2015

Further changes were made to the nose design, drivers were limited to four engines per year, significant changes to driver helmet design were banned mid season, double points were not awarded for the final race, and cars were directed to the pit lane instead of remaining on the track in case of a red flag.

2016

Since the number of races was 21, drivers were allowed to use five engines per year. Drivers who qualify for a Super License must be at least eighteen years old and have accumulated 40 Super License points in recognized sub-series. 2017

The width of the car was increased from 1800 mm to 2000 mm (reversing the change from 1998). The front tire width was increased from 245 mm to 305 mm; the rear tire width was increased from 325 mm to 405 mm.The minimum weight was increased to 728 kg (1,605 lb), and the front wings were made 1,800 mm (70.9 in) wide. Teams were limited to four engines per year regardless of the number of races, the engine token system was abolished, and power unit suppliers were now obligated to supply any team without a power unit contract. Shark fins were allowed again; T-wings were introduced by exploiting a loophole. Bargeboard dimensions were increased.

2017

The car width was increased from 1800 mm to 2000 mm (reversing the 1998 change). Front tire width was increased from 245 mm to 305 mm; rear tire width from 325 mm to 405 mm.

Minimum weight was increased to 728 kg (1,605 lb), front wings were made 1,800 mm (70.9 in) wide. Teams were limited to four engines per year regardless of the number of races, the engine token system was abolished, power unit suppliers are now obligated to supply any team without a power unit contract. Shark fins were allowed again; T-wings were introduced by exploiting a loophole. Bargeboard dimensions were increased.

2018

Despite the number of races increasing to 21, drivers were limited to only three engines per year. Shark fins and T-wings were banned again. After much debate and testing, the halo cockpit protection device was made mandatory in all FIA open-wheel championships. 2019

The front wing was simplified and made 200 mm (7.9 in) wider, 20 mm (0.79 in) higher, and moved 25 mm (0.98 in) further forward. The rear wing was made 100 mm (3.9 in) wider and 20 mm (0.79 in) higher, and a 20 mm (0.79 in) larger DRS opening was added to improve DRS, reduce dirty air, and further encourage overtaking. The winglets were removed from the brake ducts. Maximum fuel capacity was increased from 105 kg (231 lb) to 110 kg (240 lb) to minimize the need for drivers to conserve fuel during the race. Vehicle weight no longer includes driver weight. For the first time since 1959, bonus points are awarded to the driver and manufacturer for the fastest lap of the race, but the driver must finish in a points-winning position to receive the bonus points.

The 2020s witnessed the emergence of the COVID-19 pandemic, which restricted major sporting events worldwide, including Formula 1 and related sub-organizations. The 2020 Australian Grand Prix was cancelled minutes before its first practice session. The pandemic led to restrictions on car development; while the 2020 cars were to be reused for the following season, the FIA implemented a token system for the 2021 season that could be exchanged for new car parts (McLaren was given special permission to switch from Renault to Mercedes power units for the 2021 season). Many races scheduled were postponed or cancelled altogether, and new regulations planned for the 2021 season were postponed to the following year. Formula 1 returned with a shorter race calendar in Austria for the 2020 Austrian Grand Prix. To prevent the spread of COVID-19, most races in the 2020 and 2021 seasons were held without spectators or with reduced spectator capacity; However, by the 2021 French Grand Prix, spectator attendance had returned, and by 2023, most COVID-19 safety protocols had been relaxed.

The onset of the pandemic led to minor aerodynamic changes in 2020 and 2021, which also caused the new regulations, planned to come into effect in 2022, to be postponed to 2022. These new regulations, with the reintroduction of the ground effect principle, led to a major redesign of the cars for the first time since 2017. Following three years of minor adjustments to the ground effect rules, it was completely abolished in 2026 and replaced with a new "active aerodynamics" system.

2020

Teams were allowed an additional MGU-K change. Free practice sessions now count towards Super License points, and a minimum of 100 km (62 miles) without violations is required to earn a point; A maximum of ten Super License points can be earned from free practice sessions over a three-season period. The final 50 mm (2.0 in) of the front wings must not contain metal as a puncture prevention measure; from the 2020 Italian Grand Prix, drivers must use the same engine mode in both qualifying and the race, thus engine "party modes" are prohibited.

2021

A $145 million budget cap was introduced. The dual-axis steering (DAS) system developed by Mercedes was banned.Teams agreed to use their 2020 cars in 2021, provided that development is done symbolically as a result of the COVID-19 pandemic disrupting car development. Cars will be under parc fermé conditions after the end of the 3rd free practice session instead of qualifying. 2022

The ground effect, banned in Formula 1 since the 1983 season, was reintroduced. The car's underbody became the main source of aerodynamic grip, eliminating the need for side wings. The front wing and endplates were simplified; the rear wings were now wider and mounted higher. The amount of aerodynamic updates made throughout the season was limited to reduce costs. Wheel diameter was increased from 13 inches to 18 inches (33 to 46 cm). Inertors were banned to simplify suspension design. Following controversy stemming from the shortened 2021 Belgian Grand Prix, where one lap (the entire race) was run behind the safety car in heavy rain, the points system for incomplete races was changed; if a race is suspended for any reason, fewer points are awarded depending on the percentage of race distance completed. The safety car procedure was changed following controversy surrounding the final lap of the 2021 Abu Dhabi Grand Prix; the safety car will now be deployed one lap after the instruction is issued for lap-struck cars to take themselves out of

the lap, the wording of the rules was changed to clarify that "all" cars, not "any", must take themselves out of the lap. The Q2 tire rule (in effect since 2014) was abolished, and drivers in the top 10 of qualifying were given the freedom to choose their starting tires for the race.

2023

Minor changes were made to aerodynamics following reports of excessive pitching in the 2022 season. Lateral floor deviation tests were made stricter. The Halo rollover circle now has a rounded top to prevent it from getting stuck in subsequent rolls, in response to Zhou Guanyu's crash at the 2022 British Grand Prix. The scoring system was changed once again following controversy surrounding the shortened 2022 Japanese Grand Prix, where 28 of the 53 laps were completed; races that did not reach 75% of the distance were awarded shortened race points regardless of whether the race finished under a red or green flag. Previously, only half a point was awarded if a shortened race finished under a red flag. In response to the 2021 Belgian Grand Prix, PirelliFully wet tires were introduced, intended to be launched in Imola but first used in Monaco. This new compound does not require traditional tire heaters.

Development of 2024-2026 model cars was banned until 2025. Due to concerns about excessive heat during the 2023 Qatar Grand Prix, teams were allowed to install air intake ducts for cockpit and driver ventilation. The sprint weekend structure was changed again: the weekend starts with a single practice session and sprint qualifying on Friday, followed by the sprint race on Saturday. Qualifying starts after the sprint race and the race is held on Sunday. Two parc fermé periods are implemented during a sprint weekend; the first covers both sprint events, the other follows qualifying and then the Grand Prix itself. DRS is allowed one lap after the start of the race, after a safety car restart or a red flag restart. Teams can now use up to four power units before incurring a grid penalty.

5.2 2025-2026 Regulations

2026

Teams are now allowed to develop 2026 model cars. The fastest lap point system (reintroduced in 2019) has been removed. The minimum driver weight limit has been increased from 80 kg (176.4 lb) to 82 kg (180.8 lb); the total minimum car weight excluding fuel has been increased from 798 kg (1,759 lb) to 800 kg (1,764 lb). A new driver cooling system has been introduced and made mandatory for extreme temperature situations (above 30.5 °C), and to compensate, the minimum car

weight (including driver) has been increased by 5 kg (11 lb). The limit on the number of gearboxes a team can use will be removed. Due to an incident involving Sergio Pérez in the previous season, cars with significant mechanical or structural damage must retire from the race at the nearest safe point instead of going to the pit lane. In its final year of use, DRS parameters were modified to reduce the minimum clearance from 10-15 millimeters (0.39-0.59 in) to 9.4-13 millimeters (0.37-0.51 in); the upper limit remained at 85 millimeters (3.3 in) with DRS active. Two DRS modes are permitted; if the driver deactivates DRS, the wing must return to the initial mode as precisely defined. Tighter yaw tests will be conducted on the rear wing in Australia, and front wing tests will be included from the Spanish Grand Prix onwards. In free practice, junior drivers will be fielded up to once or twice per car per season. Restrictions on testing previous season cars (TPC) have been tightened: a 20-day limit will be introduced, tests will only be conducted on tracks from the previous year's calendar within the last year and not within 60 days of a Formula 1 race, and drivers currently competing in the championship will now be limited to a maximum of 1,000 kilometres (620 miles) during the 4-day testing period. If qualifying is cancelled entirely (e.g., due to bad weather), the grid will be determined according to the Drivers' Championship standings prior to the event. The starting grid protocol for withdrawing a car before the start of the race has been changed; the final starting grid will be determined one hour before the race, any car withdrawn up to 75 minutes before the start will be removed from the final grid, and all cars will be moved up in their respective positions. : Following the penalties introduced in 2024, drivers will be regulated for public statements containing profanity, statements that could "cause moral harm or loss to the FIA, its organs, members or directors," and "political, religious and personal statements or comments." Violations will result in heavier penalties such as fines, suspension of the driver's license, or point deductions. Such statements must be retracted and a full apology issued.

2026

Cars have been made shorter and lighter to make them much more agile. Ground effect has been eliminated once again and replaced with "active aerodynamics"; two modes that move the front and rear wings are offered to drivers – one for high downforce and the other for low drag on the straights. DRS has been removed and three different ERS activation modes are available: "boost" for regular use, "recharge" for energy collection, and "overtake" for extra energy use to aid in overtaking on the track, similar to DRS. The MGU-H has been removed. Formula 1 cars will now use sustainable fuel. Drivers now have permanent driver numbers.

6.Teamworks on regulations

Within the FIA, regulations are not determined by a single authority. Engineers, teams, drivers, and FIA officials are all involved in the process. While each team wants to protect its own performance

advantage, the FIA is responsible for ensuring fair competition and safety. Therefore, the process often turns into a negotiation environment where different interests clash. Balancing these conflicts is possible through effective communication, cooperation, and joint decision making mechanisms. The regulation creation process usually begins with the emergence of a specific problem. For example, a team becoming overly dominant or the identification of safety vulnerabilities may necessitate new regulations. Then, the FIA and the teams come together and present solutions.

These proposals are discussed, modified, and an attempt is made to reach a common ground. In the final stage, the decisions are approved and put into effect. A real world example of this is the aerodynamic regulation changes made in 2022. The aim of these changes was to allow cars to follow each other more closely and to make races more competitive. This decision was made not only by the FIA but also as a result of a comprehensive cooperation process involving the teams.

Before the 2009 season, Formula 1 cars were not considered very "clean" in terms of aerodynamics; that is, cars could not follow each other closely and overtaking was very difficult in the race. To solve this, the FIA completely changed the rules: front and rear wings were redesigned, diffusers and other aerodynamic parts were restricted. But this change was not made by the FIA alone. All the teams, engineers, and FIA officials came together to discuss different proposals, evaluating the advantages and disadvantages. Some teams thought the rules would give their cars an advantage, while others predicted they would create a disadvantage. As a result of the negotiation and joint decision-making process, the new aerodynamic regulations came into effect. These changes made the races more competitive and exciting, while also increasing safety. This example clearly shows that the regulatory processes at the FIA are not only technical but also strategic and require cooperation.

6.1. Regulatory checks conducted before the start of the season

One of the things done before the season starts is for the teams to review the regulations. This review is extremely important before the season begins, and doing it at the start of each season can be life-saving. One of the first things to do is to apply for technical suitability. In this case, teams submit all the technical data of their vehicles to the FIA, initiating the review of their cars. This information includes CAD drawings, material specifications, and aerodynamic structures, all of which are subject to scrutiny. The main goal here is to prevent any team from taking to the track in violation of the rules before the season begins. Following this, there are homologations, where the chassis and some key parts are approved. These parts

remain the same dimensions throughout the season, with only rare changes. The purpose of these changes is to prevent constant modifications that could lead to unfair advantages. Then, mandatory crash tests are conducted to ensure the driver can safely exit the car in the event of a fatal accident. Front, rear, and side crash tests are performed, and durability tests of parts called halos and roll hoops are conducted. Following this, physical measurements and technical checks are carried out, including checks of vehicle dimensions and minimum weight. The reasons for this are to prevent millimeter-scale cheating and to ensure an advantage. Aerodynamic suitability tests are also included, along with wind tunnel and CFD usage limits being fully checked. Finally, the engine and... Energy systems and electronic software controls are also carried out, and all of these are included in the FIA's rulebooks. However, the important details I want to highlight here are that these millimeter-scale cheats might be legal. Before the season starts, team lawyers can search the rulebooks carefully and find legal loopholes. The reason for this is to get ahead of other teams and provide an advantage. Even if other teams request an investigation, if the FIA doesn't take any legal action, that millimeter-scale cheat becomes legalized and can be used to the team's advantage. For example, in the 2026 season, Mercedes and Red Bull were able to increase the compression ratio of their pistons from 1:16 to 1:18 using some physical methods. While measurements taken while the car was stationary showed 1:16, the compression ratio could reach 1:18 during the race, and the FIA couldn't do anything about this cheating. That's why the role of team lawyers in Formula 1 is so important.And I'd like to give a few more examples: Ferrari, by recreating a system similar to the DRS system that was discontinued this year, was able to increase the car's downforce, and they were able to do this easily because there were no rules in place.

6.2. Regulations penalty system

Here, I'd just like to mention penalties other than those related to regulations. First, there are technical violations, which are the rules of the vehicle itself. For example, having a vehicle below the weight limit, using a prohibited aerodynamic part, or exceeding the fuel flow rate significantly. The penalties applied here are disqualification, which is the most severe penalty, followed by time penalties or exclusion from the race. Technically speaking, any illegal performance advantage is completely erased. Then there are sporting violations, such as intentionally hitting a competitor, exceeding track limits, or dangerous driving. The

penalties for these are 5-second or 10-second penalties. Other examples of penalties include overtaking in the pit lane, mandatory pit stops, or penalties that affect the next race. Next come part and engine violations, such as using more engine power than allowed or exceeding part limits.

The penalties for these can vary, ranging from grid penalties to pit lane starts. There are also financial violations, such as exceeding the spending limit, and the penalty system progresses with fines, reduced wind tunnel CFD time, and other penalties. There are also Super License penalty points, with points awarded for each violation. 12 points means a one-race ban; technically, these are situations implemented for behavioral control and safety. The penalty system has an engineering logic: advantage gained is followed by advantage removed, or more. An advantage gained through a rule violation is either taken back or turned into a much greater disadvantage.

7.Inter-team disputes

First, we need to list the fundamental causes of disagreements. One is the differing interpretations of technical regulations by the teams, which leads to the situation I mentioned earlier: one team creates a design that gives them an advantage by interpreting the rules differently, while others cannot interpret it and oppose that team. This is considered the most common type of disagreement. There are also sporting events, and disagreements arise from competition within the race. Financial violations should also be mentioned; investigations can be opened against teams for suspected cost cap overruns, and hidden R&D expenditures can be investigated. Finally, political and strategic disagreements can arise. Here, rules can be challenged, and reactions to FIA decisions can occur. Solution mechanisms have been developed for these issues. The first step is a protest; at this stage, one team makes official objections to the other, followed by an application to the FIA. Then, technical inspections are carried out, parts are disassembled and analyzed in detail, and engineering verifications are performed. The stewards then intervene, evaluate the events, and decide whether or not to impose penalties.

Finally, there is the appeals stage; if the teams do not accept the decision, the matter goes to

the higher committee, and the FIA intervenes at this stage. To explain the logic of technical disputes, the discussion begins with whether the solution is in accordance with the rules or a gray area. F1 regulations are not 100% definitive; some areas are open to interpretation, and teams try to gain an advantage by pushing the boundaries, while rivals try to prevent this. In short, every team has a cat-and-dog relationship with each other. If the possible results are found to be legal, the design and its use continue, and other teams try to copy it. However, if it is found to be illegal, the parts are banned, and penalties are imposed. These penalties can include disqualification and point deductions. Engineering perspectives are of paramount importance. Regulations are a limiting test of optimization; teams seek maximum advantage, and the FIA sets the boundaries. This process accelerates technological advancements but also generates constant debate.

8.Questions to be Addressed

1. Drivers are subject to safety and sporting regulations; should drivers have a say in how these regulations are determined by the FIA?

2. To what extent should engineers be involved in determining Formula 1's technical regulations?

3. Should certain teams be subject to stricter oversight within Formula 1 because they have previously exploited loopholes in the rules?

4. When the FIA sets rules regarding how much money teams can spend, should it ensure that all teams have the financial means to continue competing, or should it grant teams as much flexibility as they desire, and how does this affect fairness among teams?

9.Bibliography

Changes in technical regulations and drivers' safety in top‐class motor sports - PMC

FIA unveils Formula 1 regulations for 2026 and beyond featuring more agile cars and active aerodynamics | Formula 1®

Formula 1 2026 Regülasyonları: Devrim mi, Ruh Kaybı mı?

fia_2024_formula_1_sporting_regulations_-_issue_7_-_2024-07-31.pdf