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LICENCE TO DINE:  
007 AND THE REAL EXCHANGE RATE

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### **ABSTRACT**

We constructed a time series of menu prices for the identifiable restaurants at which James Bond dined in France and the UK that yields one of the few international price series representing luxury services. This series enabled us to calculate a real exchange rate based on prices pertinent to international travelers. We also compiled a time series on the salary of workers in the British Civil Service at Grade 7, like Bond, from 1953 to 2019. Our results indicate that French restaurant prices increased faster than Grade 7 salaries over the entire period and changes in the British exchange rate were not favorable for British travelers. To dine weekly in France, during the 1950s and 1960s, Bond would have spent 18 percent of his salary; whereas over the course of the Euro era the same basket of luxury services would have required on average 26 percent of his salary. Finally, our data indicate a likely violation of the law of one price during both the Pound-Franc and Pound-Euro eras.

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A data appendix is available at <http://www.nber.org/data-appendix/w29415>

## Introduction:

Ian Fleming's James Bond is one of the best known fictional characters of the second half of the twentieth century. Bond is featured in more than 40 novels, short stories, or collections of short stories.<sup>1</sup> His exploits are also the subject of 26 movies, which, collectively, have yielded more than \$7 billion in (nominal) box office revenues. In the United States alone, the inflation adjusted figure is nearly \$6 billion. According to *Forbes*, only the Star Wars franchise and the Marvel universe have generated more box office sales than Bond (Bean 2020).

The Bond novels record more than 500 of his meals. While Bond's eating has been analyzed for its nutritional content (Biddulph 2009) and its psychological implications (Matheson 2006), no one has examined the economics of his dining. Keys to such an analysis are the time series we constructed on the price of a meal, in a set of high-quality restaurants in both France and the UK. This evidence is of interest in its own right, as these series would be among the few price series representing luxury services. These series also enable us to calculate a real exchange rate based on prices pertinent to international travelers, such as Bond.<sup>2</sup> We investigate as well whether Bond could have afforded the sort of dining described in the novels on his salary alone, or was it possible only as a business expense. In order to do this, we compiled a time series on the salary of a class of workers employed in the British Civil Service at

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<sup>1</sup> Fleming wrote twelve novels, and two collections of short stories; Kingsley Amis wrote one novel; John Gardner wrote 16, two of which were initially screenplays; Raymond Benson wrote nine novels, three of which were initially screenplays, and three short stories; and there are at least seven additional novels and a prequel series that covers Bond's life before he was introduced by Fleming. For a detailed accounting of the Bond oeuvre, see [https://jamesbond.fandom.com/wiki/James\\_Bond\\_books](https://jamesbond.fandom.com/wiki/James_Bond_books).

<sup>2</sup> The term "real exchange rate" is typically used in the context of the aggregate economy; "the exchange rate-adjusted price" is more commonly used when one is discussing a specific good or service, such as travel or tourism. We use the terms interchangeably.

Grade 7, the same grade as Bond, from 1953 to 2019, for comparison with the menu prices. We do this over the course of Bond's entire fictional career, which spanned from the Bretton Woods era to the Euro, and through Brexit. The comparison of these two series is couched in terms of Bond's history, but it also shows how the middle and upper-middle class British travelers fared over time in the years before and after the UK joined the EU.

### **His name is Bond, James Bond**

Readers for whom the figures in the Introduction, reflecting Bond's novelistic and cinematic success, are a surprise might ask: Who is James Bond? Bond was born in the early 1920s.<sup>3</sup> His father, who was employed by a British arms manufacturer, was Scottish, and his mother's family could be traced to the Huguenot diaspora. Both parents died in a skiing accident when Bond was eleven, and, after a brief stay with an aunt, he attended Eton.<sup>4</sup> In his teens he left school early, as had Fleming, and, even before the war, Bond was employed by His Majesty's Secret Service for some undercover work in Monte Carlo. Bond formally joined the Ministry of Defense in 1941; there his official rank was "lieutenant in the Special Branch of the Royal Naval Volunteer Reserves" (Benson 1988, p. 61). During the war he assassinated two enemy spies – one was a Japanese cipher expert in New York City, and the other was a

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<sup>3</sup> Exactly who the "real" James Bond was remains a mystery that generates much debate among Bondologists. During World War II, Fleming served in British Naval Intelligence, and Bond was most likely a compendium of Fleming's war-time colleagues and acquaintances, and certain features of his character and life match those of Fleming himself, as well those of Fleming's older brother Peter, whose war-time service included overseeing clandestine operations for the War Office. For a concise summary of the relationship between Fleming and Bond, see Benson (1988, pp. 41-77).

<sup>4</sup> The chronology of Bond's life is notoriously unreliable. His birth is variously dated between 1920 and 1924; however, his earliest exploits for the Secret Service occurred before the onset of World War II. Thus, if the latter date is accepted, then Bond was a secret agent by the age of 15, which seems unlikely.

Norwegian double agent in Stockholm – thus, eventually, earning the “00” designation that gave him a “licence to kill.” By the end of the war he had achieved the military rank of commander, and a few years later we pick up his trail in the first of Fleming’s novels, *Casino Royale*.

Bond is well-known in both the books, and movies that followed, for his expensive taste in clothes and cars, as documented in *The James Bond Dossier* (Amis 1965) and *The James Bond Bedside Companion* (Benson 1984 and 1988). Perhaps because he did not dine much in the movies, it is less well-known that he dined often and very well. For example, in his massive review of all things Bond, Benson spends less than two pages on Bond’s dining. Yet, soon after we first meet Bond in *Casino Royale*, Fleming has him enjoying a good breakfast of “half a pint of orange juice, three scrambled eggs and bacon, and a double portion of coffee without sugar” (1953, p. 23), and Fleming frequently described Bond’s meals in detail. For example, in *On Her Majesty’s Secret Service*, Bond dines at “one of his favorite restaurants in France,” ordering the “Turbot poche, sauce mousseline, and half the best roast partridge he had eaten in his life” (1963, p. 22).<sup>5</sup> In every Bond novel, whether written by Fleming or one of his successors, descriptions of meals, as well as recollections of previous dining experiences and favorite restaurants, were common – over 500 in total, roughly 12 times per novel, or once every 21 pages (Weiss 2015, pp. 106-12). Many of those meals were taken at some of the finest restaurants in the world. When Bond had achieved Double-0 status in the early 1950s, he realized how well off he had become with the salary increase and more generous expense account that came with the

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<sup>5</sup> Curiously, in the same book, Fleming alleged that Bond was not a gourmet. Ben Macintyre, on the other hand, fully recognized the quality of Bond’s dining in the novels, claiming “Bond is a foodie; indeed, he may be the first action-foodie-hero in the thriller genre” (2008 Kindle ed. Location 1383).

promotion. As Bond himself put it, “A licence to kill, it seemed, also came with an almost unlimited licence to spend” (Horowitz 2018, p. 43); and spend he did, especially on meals.

## **The Restaurants**

In the Bond novels, there are over 100 identifiable restaurants, roughly two-thirds of which are still in operation, or were so before the global pandemic of 2020. Twenty-three of the restaurants mentioned in the novels are located in France, with 14 of them in Paris or its *environs* (that is, within 40 km around Paris). Bond splurged on meals at some of the finest restaurants of his day; all but two of the 23 French restaurants were selected by the experts for inclusion in the internationally renowned Michelin Guide, an indicator of restaurant quality and ambience. The Michelin Guide includes restaurant prices, which allows us to construct a unique time series centered on the prices of meals at a variety of restaurants ranging from bistros to legendary establishments.

The Michelin *Guide Rouge* began in 1900, but did not publish information on restaurants and hotels until 1920, when it provided lists for Paris, with the restaurants classified as Deluxe, First class, Very comfortable, Fairly comfortable, or Plain but good.<sup>6</sup> In 1926 Michelin began awarding a star to the best places and in 1931 established the star hierarchy that still exists today: zero, one, two and three stars.<sup>7</sup> Initially, the Guides covered only France, and the descriptions of stars reflected that. Three stars meant “One of the best tables in France, worth a special journey.” Two meant “excellent cuisine, worth a detour;” while one star meant “a good meal for

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<sup>6</sup> These classifications were signified by the number of knives and forks awarded to each establishment.

<sup>7</sup> From this point on, the knives and forks provided additional evaluation of the comfort and luxury of the restaurant itself. See <https://guide.michelin.com/en/about-us>. Curiously, some restaurants located in hotels were not assigned knives and forks, even though some most likely deserved the recognition.

the district” (Michelin 1953). After the Guides expanded coverage to include other countries, the definitions changed slightly, but remained essentially the same. Today three stars means “exceptional cuisine, worth a special journey!” Two stars means “excellent cooking, worth a detour!” and one means “high quality cooking, worth a stop!” (Michelin 2019, p. 31).<sup>8</sup>

Fleming, Bond’s creator, had impeccable taste when it came to the French restaurants mentioned in his novels. All but one can be found in the Michelin Guides around the time the novels were published, and the exception, Le Dome, subsequently made the grade. It seems certain that Fleming referred to the Michelin Guides, as did Bond, who, for example, “consulted his Michelin” as he approached Orleans in pursuit of Goldfinger (1959, p.103). And Fleming did not choose the restaurants at random; from 1953-1966, the years in which Fleming wrote the novels, *on average* six of the restaurants mentioned in the books were listed in the Guides each year, and averaged 1.67 stars per restaurant. Even if we included in the calculations the restaurants mentioned in Fleming’s novels but not listed in the Guides, the average rating would be 1.2 stars in the 1953 guide, 1.3 in 1955, 1.0 in 1960, and 0.8 in 1964; ratings which were well above average for restaurants in France, or just about anywhere else. Had Bond – or Fleming – chosen restaurants randomly from the Guide, the average would have been only 0.25 stars. Subsequent authors in the series followed Fleming’s lead in both frequently including Bond’s dining in their narratives and choosing above average restaurants.

The sample of restaurants we analyze consists of the 18 restaurants for which we have price data in almost all years from 1953 to 2019, as opposed to the larger sample of restaurants

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<sup>8</sup> The Guides provide further detail as to what each of these categories means, and some of the non-starred restaurants are placed in a *bib gourmand* category, places with “good quality, good value cooking” (2019, p. 31).

that make up the entire Bond list.<sup>9</sup> The sample includes a variety of restaurant types, ranging from two of the most highly rated restaurants in France -- Oustau de Baumaniere, located in Les Baux de Provence, and Grand Vefourn in Paris, both of which had 3 stars -- to bistros like Le Galion in Menton, Chez Andre and Terminus Nord in Paris, and La Rotonde de Montparnasse as well as La Rotonde in Nice. The sample does have a disproportionate number of places in Paris; ten are located there in six different *arrondissements*.

It is striking, in an industry noted for the turnover of its firms, how many of these restaurants have survived for a very long time. Although nearly half of them have not been included in the Guide in the past five years, most are still around; only five are no longer in operation. Because these restaurants have been around for so long, and been reported on in the Michelin Guides, it is possible to chart the price of a typical meal for a sample of 18 of them from 1953, the year Bond first appears in *Casino Royale*, until 2019.<sup>10</sup> This sample is not a random one. It has been determined instead by the literary history of James Bond and by the availability of menu prices in the Michelin Guides. Inclusion in the guides introduces a bias; the point of the guides is to identify higher quality restaurants. And as noted above, even among the restaurants in the guides, the authors appear to have chosen places that were above average in quality. Still these are restaurants and prices that are of interest to a substantial portion of the affluent traveling population and offer a chance to construct a novel data set for high quality

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<sup>9</sup> There were five other restaurants mentioned in the novels that were reported in the Guides in only two or three years, or not at all in the case of the Blue Lagoon located in Disney World.

<sup>10</sup> The Guides occasionally provided information on the number of restaurants reported on in that year's volume. For example, in 1960, that total was 2,900; in 2017 and 2020 it was 4,300. So this sample represents 0.6 percent of the restaurant population in the Guides in the early part of this period, declining over time to 0.4 percent by the end of the period.



dining, covering a long period of time, for a surprisingly stable set of restaurants. As such, the sample offers solid evidence on the behavior of restaurant prices over time and shows the usefulness of the Michelin Guides, and perhaps comparable publications in other countries, as a data source.

### **Menu Prices**

While Michelin hired people who evaluated the restaurants anonymously, the individual establishments supplied the prices of meals published in the Guides. The prices were reported in the autumn of the year preceding publication, and the establishments "...assumed responsibility for maintaining them for all travelers in possession of this guide," although the prices could change "if goods and service costs are revised" (Michelin 2003, p. 24). Almost all the restaurants listed in the guides reported price data.

Prices could be reported for both a *prix fixe* menu and for a typical *a la carte* meal, but until 1993 almost all restaurants listed only one type of meal in the guides. Most of those in the sample reported the *carte* price, which was the sum of the prices of individual items that could be ordered *a la carte* to make up a complete meal, while a minority reported a fixed-price menu. Some reported a single price for the meal, whether from a fixed menu or *carte*; others provided a range with the two prices indicating "the price of a simple meal and that of a more complete one." By 1993 it was more common for restaurants to report both a fixed-price menu and an *a la carte* price, but still not all restaurants did so. Some reported only a fixed-price menu and some only the *a la carte* price. In most of the restaurants that reported both, the range of prices was similar for the two types of meals; so if the *carte* price was missing, the fixed-menu price appears to be a reasonable substitute. Thus it was possible to compile a fairly continuous time series on the price of a meal at the restaurants mentioned in the Bond novels. Our series covers

the low price for the *carte* menu.<sup>11</sup> It is not entirely continuous because we have gathered data for only 36 of the 67 years in the period. With a few exceptions, however, the data cover every other year, and the sample represents a majority (18) of the 23 restaurants on the Bond list in each year.<sup>12</sup>

There are two issues that complicate the calculation of a price series for a meal in a restaurant using these data. First is the matter of missing observations. Some restaurants did not report a *carte* price in all years, and over the years, some restaurants were dropped from the Michelin Guide, a few permanently, even though they may still have remained in business, but some were reinstated at a subsequent date. Second, changes in the star rating of a restaurant might have resulted in a change in the menu price. In the Bond list, three-star restaurants typically had higher prices than two-star restaurants, and the latter had higher prices than one-star restaurants, but not always.

These problems were not insurmountable, and an assessment of their likely effect indicated they did not introduce any serious bias. With a sample of only 18 restaurants, their coming and going could have affected the average price for the group; however, the impact of

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<sup>11</sup> We focused on the low price in the reported range because we think this would be the price used to compete with other restaurants, and it seemed likely that those restaurants that reported only one price were reporting the low value. Furthermore, the high priced menu had no upper bound that was comparable across restaurants. For example, in 2001, Lucas Carton, with three stars in the Michelin Guide, reported a low menu price of 740 French Francs, equal to that offered by Grand Vefour, another three-star restaurant. But at the high end, Lucas Carton reported a price of 1,490 FFs, 500 FFs higher than the Grand Vefour's high price. A chef or restaurateur could offer the ultimate in gourmet dining with many courses, featuring exotic and rare ingredients, that was likely appreciated by only a small number of potential patrons.

<sup>12</sup> The gaps of more than one year are: 1956-59, 1961-63, and 1968-70.

some restaurants being dropped for part of the period does not appear to have affected the average price for the group. We calculated an average price for a smaller sample of 10 restaurants that excluded those that were included for only some portion of the time period, and the result mirrored very closely that for the entire sample. Over the two long subperiods, one when the currency was the French Franc (1960-2001) the other when it was the Euro (2002-2019), the average prices for the smaller sample were 15 to 18 percent higher, but the rates of growth were very similar: 7.8 percent per year for the reduced sample versus 7.6 for the full sample in the Franc period, and 2.1 versus 2.2 in the Euro period.

Likewise, an examination of the price behavior for specific restaurants on the Bond list does not reveal an obvious relationship between changes in stars and menu prices. Analysis of a larger sample may very well reveal a significant statistical relationship, but for this sample, factors other than the award, or loss, of a Michelin star must have been of greater importance in determining the pace and pattern of price changes at individual restaurants. Nevertheless, it is worth noting that between the 1950s and 2019 the average quality of Bond's restaurants, measured by the average number of stars, declined. The average for all of the Bond restaurants, whether they are included in our sample or not, fell from 0.83 in 1953 to 0.43 in 2019.<sup>13</sup> That still exceeds the average number of stars and the related quality for all restaurants listed in the Michelin Guide, but it does mean that a constant menu price over time, after adjusting for general inflation, would have purchased a meal that had declined in relative quality.

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<sup>13</sup> The average number of stars for those restaurants listed in the guides in these two years was 1.5 in 1953 and 1.3 in 2019. This value differs slightly from that cited earlier, which referred to only the restaurants mentioned in the novels written by Fleming.

Furthermore, the notion of a simple meal changed over time, not only in the definition offered in the Michelin Guidebooks, but also in the minds of the chefs, perhaps especially in starred restaurants.<sup>14</sup> According to the Guide, in the 1950s, the lower priced meal included a cover charge, light entrée, *plat du jour* with vegetable, dessert, ½ bottle or carafe of house wine, coffee and service. The higher figure was for a fuller meal (with *spécialité*) and included cover charge, hors-d'oeuvre, two main courses, cheese, dessert, ½ bottle or carafe of house wine, coffee and service. In the 1960s, the food included in the meals was the same as in the 1950s, but the meal no longer included wine, coffee or service unless indicated with the following letter codes: *bc*, meaning with local drink, possibly wine, and *stc* or *S*, meaning with service and taxes.<sup>15</sup> At the beginning of the new century, the definitions of lower and higher priced meals were the same as in preceding years, but starting in 2005 the higher priced meal included only one main course, and since 2015 no details have been provided as to what was included in the

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<sup>14</sup> Of course what came to mind when each chef or restaurateur proposed his or her menu varied from one establishment to another, and changed over time. In 1955 Grand Vefour, with its three stars, featured *toast de crevettes Rothschild* and *Ballotine de volaille*; in 1990; with only two stars, the specialties included *petite degustation de homard et cervelle en mariniere* and *foie de canard braise en pot-au-feu*; and in 2019, and still holding two stars, the restaurant offered *Ravioles de foie gras, crème foisonne truffee* as well as *Parmentier de queue de boeuf aux truffes*. The fixed- menu price at Vefour meanwhile had risen from 23 FFs in 1953 to 990 FFs in 2001, the year before the Euro was adopted, and rose further from 221 Euros in 2002 to 315 Euros in 2019. Vefour, of course, has been one of the most famous restaurants in Paris for over 100 years, and when it did not report prices in 1953, the Guide inserted that "... in these restaurants, price has no meaning" (1953, p. 20), though, clearly it did have meaning for the lower-priced meals included in our sample.

<sup>15</sup> Beginning in 1971, the price included the value added tax, and, from 1988 on, service was also included in the price.

lower and higher priced meals for either the menu or the *carte*. Clearly, over time, one received less for one's money.

We have constructed two versions of the low *carte* price series, one which includes only the *carte* price for food and the VAT, and a second, the price *compris*, which includes the *carte* price and VAT plus an addition for wine and a service charge. We first reduced the prices in those restaurants that had included service or wine so that the price included only the food and the VAT. Those that included wine were most of the restaurants in 1951, 1953 and 1955; and then isolated cases in other years. Those that included service were isolated cases before 1988; then all restaurants thereafter. We then adjusted all of the *carte* prices to obtain the *price compris*, a price that includes the price of the food, plus wine, the value added tax (VAT) on the food and wine, and a service charge on that total.<sup>16</sup> Evidence from restaurant receipts and *prix fixe* menus indicates that the service charge was consistently 15% in France (12.5% in the UK), and levied on food, wine and the VAT.<sup>17</sup>

(Insert Table 1 here.)

*Carte* prices rose noticeably even in the early years of Bond's career. Between 1953 and 1967, the low price at the restaurants on the Bond list more than doubled, rising from 12 FFs to 20FFs in 1960, 27FFs in 1964 and 33FFs in 1967. By the time John Gardner began writing novels in the Bond series in 1981, menu prices were much higher, having increased at 10 percent

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<sup>16</sup> These prices include only the VAT, not local taxes that may have prevailed in some locales. VAT was included from 1971 on, and there was no VAT before 1968. As we have no observations in 1968, 1969 or 1970, we did not need to make any adjustments for those years.

<sup>17</sup> The implicit amounts deducted to obtain the *carte* prices were estimated using the same wine and service rates that we eventually use to add these elements to the price for every restaurant in order to derive the *price compris*.

per year, on average, between 1967 and 1981, and they continued to increase at more than 6 percent annually in the years during which Gardner wrote his Bond novels. In French Francs, the menu price that had been only 33 FFs in 1967 was 125FFs in 1981 and 327FFs in 1997. A weakening of the Pound-Franc exchange rate resulted in a somewhat faster increase in the price in British Pounds, from 2.4 Pounds in 1967 to 11.3 in 1981 and to 34.2 in 1997. From 1997 until the start of the Euro period, during which time Raymond Benson wrote nine Bond novels and short stories, prices rose more slowly, at around five percent per year, and ended the French Franc era at 403 FFs. As the Pound had strengthened against the French Franc during this last decade of the Franc, the price in British currency rose a bit less from £34.2 to £38.2 in 2001, but then jumped to £48.9 in 2002. The Euro was introduced as a unit of account in 1999, but it did not circulate as a medium of exchange until 2002; from that date on the Michelin Guide reported prices in Euros. In the Euro period, *carte* prices rose modestly at 3 percent per year, from 68.2 Euros in 2002 to 98.4 in 2019. The Pound depreciated relative to the Euro; so Bond, or his successors, would have seen the price rise by 5 percent per year, from £42.9 in 2002 to £86.2 in 2019.

Overall, from 1953 through 2019, the *carte* price, expressed in British Pounds, rose at 6.4 percent per year when calculated at a constant exchange rate and 7.0 percent at current exchange rates. In either case, the price increased faster than the French CPI, which rose at 4.2 percent per year. Restaurant dining was becoming increasingly expensive relative to other goods and services. Furthermore, as noted above, the quality of the restaurants on the Bond list had declined over time, at least in a relative sense, as measured by the average number of stars awarded by the Michelin Guide. And, in a manner of some importance to Bond, the meal had

been reduced in quantity when a beverage was no longer included, which raises the question of how to deal with wine.

In the novels, wine was Bond's drink of choice. Indeed, the vintage of the wine was of greater importance than whether his martini was shaken or stirred. In the novels he ordered martinis only a handful of times. The selection of wine was more important; ordering the right wine to accompany a dish and knowing the best vintages for a particular wine were marks of a man of the world in Bond's view.<sup>18</sup> Bond was especially fond of champagne, be it Bollinger, Dom Perignon or Veuve Clicquot, but drank many other varietals, notably wines from Bordeaux such as Chateau Batailley 1958, Lynch Bages 1953, and Mouton Rothschild 1953. While he may have prided himself on knowing the best wines and vintages, he did not always drink them. He often drank the house wine, or a generic French wine or white wine. In *You Only Live Twice*, he did order the best bottle of Chablis in an airport hotel in Dublin, but he also drank "a serious bottle of plonk" (Fleming 1964, p. 37).

Wine prices, however, are harder to come by than meal prices, and the amount spent on wine during a meal could vary widely due to a number of factors, such as the variation in the price of the same wine across restaurants, or a penchant to splurge on occasion. We have adjusted Bond's cost of dining by adding in a wine component. We have made two estimates: one calculating the wine cost as a constant 67 percent of the *carte* price, the other a series that incorporates an upward trend of 0.7 percent per year in the percentage of the *carte* price spent on

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<sup>18</sup> As a product of the striving British middle-class, Bond always made an effort to punch above his weight when it came to matters of taste. He was more than a little self-aware of this trait. When he first dines with Vesper Lynd in *Casino Royale*, he quickly identifies, and apologizes for, the "pretension" in his recognition of a wine especially recommended by the sommelier, which, Bond explains, is "not a well-known brand" (1953, p. 48).

wine.<sup>19</sup> The estimates are based on a sample of 102 observations from three sources: receipts for meals taken in restaurants in France from 1994 to 2018 (n=70); a set of fixed price menus for French restaurants in 2020 that included the option to buy wine to accompany the set meal (n=19); and prices of a half-bottle of the house wine at restaurants on the Bond list and reported in the Michelin Guides for 1964 and 1967. In order to standardize the items in Bond's luxury basket, the wine cost represents the price of a bottle of wine. A constant percentage spent on wine means the price of a bottle was increasing at the same rate as the price of the food, and that the price *compris* was increasing at the same rate as the *carte* price. With the upward trend in the wine cost percentage, the price *compris* rises faster than the *carte* price. In either case, however, the average price with wine is noticeably higher than that without wine, and figures prominently in whether Bond could continue to afford to dine so well.

### **Bond's Salary**

At the start of his career as a Double-0, Bond was paid reasonably well, perhaps very well. In *Moonraker*, Fleming tells us that Bond “earned £1,500 a year, the salary of a Principal Officer in the Civil Service, and he had a thousand [pounds] a year free of tax on his own” (1955, p. 12).<sup>20</sup> Bond's £1,500 salary cited in the early novels was well above the average annual earnings of £434 in the UK at the time (Clark 2021). Jenkins (2015, Figure 3) reports that, in 1960, UK real annual income per worker at the 90<sup>th</sup> percentile was twice what it was at

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<sup>19</sup> The estimated cost rises from 45 percent in 1953 to 73 percent in 2019. See the appendix for details of our estimate of wine costs.

<sup>20</sup> The exact source of Bond's independent income remains a bit of a mystery. Benson refers to it, but offers no additional insight into its source (1988, p. 71). In any case, we ignore this income in our analysis in order to focus on the purchasing power of his salary alone.



the 50<sup>th</sup> percentile; so that puts Bond well into the 90th percentile, and we conclude that he was indeed doing quite well on his Double-0 salary. With that income he could very well have afforded to indulge in fine dining. While today it seems to some of us that dining at restaurants with Michelin stars, especially three stars, requires the salary of a very successful hedge fund manager, this was not the case when Bond embarked on his Double-0 career. In 1953, the low carte price at the restaurants on the Bond list averaged 12.2FFs or £1.2 (at the exchange rate current at that time). Even at the top restaurants, prices were not sky high, averaging £1.8 at three restaurants – Grand Vefour, Lucas Carton, and Oustau de Baumaniere – that held two or three stars in almost every year from 1953 to 2019. Had Bond dined at one of those three restaurants each week for the year, his expenditures would have totaled £94 without wine or service, £108 with service, and £180 with wine included. In other words, Bond could have dined very well and spent no more than 12 percent of his salary, and even less if he had settled for the ‘house wine’ at lower prices than those implicit in our estimate of wine costs.<sup>21</sup> Of course, Bond did not always eat alone. Although he tells Vesper Lynd in *Casino Royale* that when “I’m working I generally have to eat my meals alone” (1953, p. 48), dining with “Bond girls” was an important component of his character; so doubling those percentages would yield an upper bound on the figure. Still, it is not unreasonable to think he could have afforded to dine out regularly at nice restaurants, with a companion, in the early 1950s.

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<sup>21</sup> The 12 percent is roughly twice the figure spent on “food away from home” in the United States in 2018 and 2019 (USDA 2021), which seems reasonable, given that Bond was a bachelor who enjoyed dining out, and whose work schedule often made it difficult for him to prepare meals at home.

Could he, or his fictional counterpart, do it today, or at other times over his nearly 70 year career?<sup>22</sup> Did his salary keep pace with the rise in *carte* prices? Regrettably, the authors who penned the novels covering Bond's career beyond the era covered by Fleming made no mention of his salary. Thus we have estimated his subsequent salary based on that of someone in the same Civil Service grade as Bond. The short answer is that over the entire period from 1953 to 2019 his salary pretty much kept pace with meal prices, increasing on average at 6.3 percent per year, and he would have been able to dine as well for most of the French Franc period, but less so in the Euro era.

(Insert Table 2 here)

The little evidence about salaries found in the novels pertains to only a portion of the period in which Fleming wrote. Several citations seem to indicate that Bond's salary did not change at all between 1953 and 1959. Horowitz (in *Forever and a Day*) puts Bond's salary at £1,500 when he was promoted to Double-0 status after having completed his first assignment. That had to have been sometime well before 1955, the year in which *Moonraker* was published; so we have assumed that his first assignment, following elevation to Double-0 status, was in 1953, the year in which the events in *Casino Royale* took place. His salary was also reported as £1,500 again in the 1959 novel *Goldfinger* (p. 21). In the latter, Bond made his own calculation that the high price of his suite at the Hotel Floridiana in Miami, \$200 a night, would exhaust his salary in three weeks. With the exchange rate at \$2.8 per Pound, the arithmetic works out to

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<sup>22</sup> While Bond's salary was comparable to that of a Principal Officer in the Civil Service, it was probably higher than what actual MI6 operatives earned at the time and later, and Fleming likely knew that (Chancellor 2005, p. 66). Indeed, according to the Civil Service guidelines, a Commander, which was Bond's military rank, would more likely have been a Senior Executive Officer, a step below Principal Officer.

almost exactly £1,500.<sup>23</sup> That constant salary would not have posed a problem in coping with higher menu prices in those years because of favorable changes in the exchange rate. Indeed, in 1959, Bond would have spent less on meals in French restaurants than he had earlier in the decade, because the British Pound had appreciated by 40 percent relative to the French Franc.

There is no information on his salary for the remaining years in which Fleming wrote, or for any years thereafter, but there is no reason to think that his salary had remained constant over the entire period covered by Fleming, and certainly not over the years since then. While his exact salary may be unknown, perhaps even classified, it is possible to make reasonable approximations. Bearing in mind that Bond's salary in the 1950s was described as equal to that of a Principal Officer in the Civil Service, we have used the evidence on Civil Service salaries for those employed in a comparable grade, which today would be grade G7.<sup>24</sup> Although we were unable to locate a continuous time series for the median salary of a full-time male employed in the Civil Service at grade G7 for the entire period 1953 to 2019, we were fortunate enough to have obtained a series compiled by Martin Stanley, the Editor of the Understanding Government websites.<sup>25</sup> His series provides the average earnings for male and female employees in grade G7 from 1970 to 1997. These were adjusted upward slightly (by 1.1%) to represent male employees, the percentage being based on data for 2000-02, years in which male salaries for Grades 6 and 7 could be directly compared to those for male and female combined. From

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<sup>23</sup> Benson provides a similar calculation (1988, pp. 71-72).

<sup>24</sup> Bond was paid as a Principal Officer by virtue of his position as Commander in the Royal Navy. Others in the military paid at this same grade would have been Colonels and Captains. On the civilian side are those with titles such as Deputy Director and Policy Manager who advise Ministers and implement Ministers' decisions. [www.civilservant.org.uk/information-grades\\_and\\_roles.html](http://www.civilservant.org.uk/information-grades_and_roles.html).

<sup>25</sup> <https://www.understanding-government.org.uk/> Stanley's data were taken from Hansard.

that date forward we used data from the annual report on *Civil Service Statistics* to construct a series on median salary for male employees at grade G7. For some years G7 salaries were reported separately, while for other years we estimated the G7 salary as a proportion of that reported for the combined group of G6 and G7 employees; the proportion being 94.5% for the years when those salaries were reported separately. These were then adjusted to the higher level for male salaries. For the years before 1970, we assumed that Bond's salary remained unchanged at £1,500 from 1954 until 1959, as per the Fleming novels, and then increased at a steady annual rate to reach the known median salary for 1970.

It is possible that Bond's salary was above the median for his Civil Service grade; perhaps it included a risk premium, or increases for years in service. To cover that possibility, we have also constructed a series on the top quartile salary at the G7 grade. The statistics reported for the years since 1995 indicate that the average salary in the top quartile for all Civil Service employees was very consistently about 28 percent above the median. We have assumed that same ratio held for G7 in those years, and for the entire period under consideration. Both series are shown in Table 2, along with a time series on average annual earnings in the UK.

## **The Results**

The trends in these key series are shown in Figure 1, and they seem quite clear. From 1953 to 2019, the average price *compris* (with a constant wine percentage) -- valued in British Pounds at a constant exchange rate (the average rate for 1999-2001) -- increased at 6.4 percent per year, barely faster than the increase of 6.3 percent per year in Bond's salary. Over that same period, however, changes in the Pound-Franc exchange rate were not favorable for Bond, with the result that the price *compris* rose faster than his salary by 0.7 percent per year over the entire period.

(Insert Figure 1 here.)

There were some noticeable differences in specific subperiods. From that perspective it is useful to look at the average earnings and prices to calculate the share of income needed to buy the “luxury basket” – i.e. meals with wine at the restaurants in our sample – in subsets of years that correspond to the dates in which the different authors wrote the Bond novels. The dating of the novels does not correspond strictly to historical time on a year-to-year basis, but for most of Bond’s career the novels are set in the era in which the author was writing. Thus the Fleming novels were set in the 1950s and 60s; John Gardner’s were set in the 1980s; and Raymond Benson’s in the 1990s. Those written after 2008 by Sebastian Faulks, Jeffery Deaver, William Boyd and Anthony Horowitz, however, set the story back to when it started. Nevertheless, we call the period in which they wrote the Euro era.

We calculate the average cost of a luxury basket of goods, made up of only two items, for each subperiod, and express it as a percentage of Bond’s income. The two items are: dining weekly with a “Bond girl” at some of the best restaurants in France and enjoying two bottles of wine.<sup>26</sup> The costs of that basket as a percentage of income for the different sub periods are shown in Table 3 and Figures 2A and 2B. There are two sets of measures: one using the constant exchange rate, the other using the current exchange rates. The series based on the constant exchange rate reflects the growth of restaurant prices and associated wine prices relative to Bond’s salary; that based on current exchange rates reflects the impact of those changes as well

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<sup>26</sup> The wine shares described above were standardized to one bottle of wine per person, the price of which varied with the price of the meal. See above and the data appendix for details.

as changes in the exchange rate. As noted above, all of these calculations are based solely on Bond's gross income.<sup>27</sup>

(Insert Table 3 and Figures 2A and 2B here.)

In the Fleming era, Bond would have spent on average 17.9 percent (using current exchange rates) of his salary to dine well with a companion, slightly better than he could have done in 1953, as described above.<sup>28</sup> And, despite the fact that the average restaurant price in the Gardner era was 12 times that of Fleming's era, Bond's salary had more than kept pace. The British Pound, however, had weakened against the Franc, so the net effect is that the income share needed to buy the basket of luxury dining rose to 21.2 percent (at current exchange rates). The average restaurant price rose another 57 percent between the Gardner and Benson periods, but Bond's salary bettered that, having risen by 60 percent, and the exchange rate worked slightly in Bond's favor. Dining out would have required slightly less than 20 percent of his salary. In the Euro period, however, Bond had more of a struggle to maintain that lifestyle. The average restaurant price rose by 41 percent between the Benson era and the Euro era, while Bond's salary increased only 29 percent. On top of that, the Pound fell considerably relative to the Euro; so, at current exchange rates, Bond would have had to spend 26.4 percent of his salary

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<sup>27</sup> We are also ignoring other travel costs needed to dine in France; so this might be better thought of as dining in high-quality restaurants, some of which might be located in London.

<sup>28</sup> There were restrictions in the post-World War II era on the amount of currency that could be taken out of the country; so Bond may not have been able to access this particular luxury basket, on a weekly basis, even if that had been logistically and financially possible. However, Fleming's annual travel to, and extended stay in, Jamaica suggest that the restrictions may not have been as binding as intended. In any case, the restrictions ended in 1975, so they would not interfere with Bond's enjoyment of French restaurants in the other authors' eras.

in the Euro era. If we allow the wine cost percentage to rise over time at 0.7 percent per year, the results are not substantially different, but nevertheless it would have been easier to purchase the luxury basket in the Fleming era, but a bit more difficult to maintain that lifestyle in the Euro era (see Table 3 Var.B). Bond would have spent a smaller share of his income in the Fleming era and a slightly larger share in the Euro era.

By comparing the income shares calculated using constant exchange rates with those using current exchange rates, we can see that increases in the share were due entirely to the deterioration in the Pound-Euro exchange rate when the wine cost percentage was held constant. When the wine cost share was allowed to increase, the worsening of the exchange rate still accounts for most of the increase, but the rise in food prices evident in the constant exchange rate series accounts for 2.5 percentage points of the overall increase. It is also worth noting that Bond's real income was not faring as well during this period, having declined by 5 percent from that of the Benson era.

Of course, it is possible that Bond's salary would have been higher than the median in his pay grade, after many years of service, or, as noted above, because there may have been a risk premium added to his salary. In which case he may very well have been in the upper quartile of those employed at grade G7, which means his salary would have been roughly 28 percent higher than if it had been at the median. Even at that higher salary, he would still have had to spend 21 percent of his income at current exchange rates on dinner for two in the 2002-19 period. While that may seem a little too steep for many of us, perhaps not for a *bon vivant* like Bond, who, after all, was not saving for his children's orthodontia or education. And, of course, some of his meals would have been paid by his employer. Moreover, as described above, in the earliest years of his career, dinner for two each week at a sample of French restaurants mentioned in the novels

would have amounted to a smaller share of his income. This penchant for fine dining, whether paid by Bond or Special Branch, suggests an alternate dialogue for the scene in the movie *Goldfinger* in which the villain threatened Bond's private parts with a laser beam. As the beam crept closer, Bond asked "Do you expect me to talk?" It is easy to imagine that Goldfinger's reply could have been, "No, Mr. Bond, I expect you to dine."

It is doubtful the same advice would be offered to Brits more generally. The median income in the UK was a fraction of Bond's (see Table 2). At the start of his career, Bond's salary was more than three times the median UK income, and his luxury basket would have consumed 59 percent of the UK median income in the Fleming era. The disparity decreased over time, even during the Euro era when Civil Servant salaries were stagnant. Bond's salary mirrored that of Civil Service pay, which has not risen much since 2010. The Senior Salaries Review Body reported that the real value of the pay of a typical member of Senior Civil Service had fallen by 20-25 percent from 2010 to 2014 "as a result of the pay freeze, inflation, tax and National Insurance changes, reductions in bonuses and increases in pension contributions."<sup>29</sup> The evidence we present in Table 2 suggests that their pay remained frozen until 2019. Many middle and upper income earners in the UK experienced more favorable income growth in the Euro era; perhaps more accurately, they experienced less unfavorable changes in their salaries. While the nominal salary of Bond and others employed in the Civil Service was rising by only 4 percent from 2010 to 2019, the median earnings in the UK had risen by 20 percent; but in real terms, Bond's salary fell by 19 percent, while the UK median fell by only 6 percent. That less unfavorable salary record, however, rested on a substantially lower salary level; so was not likely to push many British travelers to take up gourmet dining in France. Beyond the constraint of

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<sup>29</sup> See <https://www.civilservant.org.uk/information-pay-general.html>.



their lower salaries, they, like Bond, would have been buffeted by changes in the exchange rates and in French restaurant prices. In the Euro era the luxury basket *on average* would have cost 66 percent of the UK median income.

### **Broader Implications for Travelers**

An exchange-rate-adjusted price is a way to measure the effective price of goods and services in a foreign destination, and captures the impact of both relative inflation and exchange rate fluctuations.<sup>30</sup> An increase in this ratio implies that purchases in France had become relatively more expensive for UK travelers because the foreign currency had become more expensive in terms of Pounds and/or the inflation rate abroad was higher than that in the UK.

Research on the economics of tourism typically employs the consumer price indices in the two countries to measure relative price changes because the equivalent of a strictly tourism price index, which would be preferred, is not available.<sup>31</sup> With our data, we can compare the exchange-rate-adjusted price ratio estimated using the commonly-used CPI indexes with estimates using our new series on restaurant prices in France and the UK. The formula used in most studies for the exchange rate adjusted price (RP) would be as follows:

$$RP_t = (CPI-France_t / CPI-UK_t) * (£/FF)_t \text{ or } (£/Euros)_t \quad (1)$$

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<sup>30</sup> See Rosensweig (1986, p. 61) and Lim (2006, p. 58). The “exchange rate-adjusted price” is tantamount to “the real exchange rate.” The latter is used when analyzing the aggregate economy while the former is more commonly used when examining the market for a specific good or service, such as travel or tourism.

<sup>31</sup> In their study of travel from the US to Europe, Dupont, Gandhi, and Weiss (2011) and Dupont and Weiss (2013) found that this variable had little impact, and even the wrong sign in some time periods; the authors argue that this likely indicates, among other things, that these general price indexes are poor measures of relative travel costs.

(Insert Table 4 here.)

We have calculated this traditional measure, and a second version, in which we substitute the French Restaurant Price index for the French CPI, and a third in which we use the relative Restaurant Price Indices for both France and the UK.<sup>32</sup> The average rates of growth are shown in Table 4. The Exchange-rate adjusted price calculated using the more general price index declined during the Franc era because prices in the UK were rising faster than those in France. And the French Franc was slightly cheaper in 2001 than in 1953. Within this period there were fluctuations in this RP, but over the long term it was favorable for British travelers. In the Euro era, the general price index in the UK continued to increase faster than the French CPI, but the Euro increased in value so that on balance the RP rose by 1.1 percent per year calculated with the UK-CPI. Over longer time periods spanning both the French Franc and Euro eras the result was slightly favorable for the British traveler from 1953 to 2019 as the RP fell by 0.11 percent per year, and even a bit more favorable in the period 1976 to 2019 as the RP fell by 0.17 percent per year.

If we substitute the French restaurant price index for the more general French CPI, the results are much less favorable for British travelers in both the Franc and Euro eras. The RP index rose at 1.57 percent during the earlier era, due almost entirely to a more rapid increase in the French restaurant prices; and 1.93 percent per year in the Euro era, due primarily to the

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<sup>32</sup> We have constructed a price series for restaurants in the UK that are conceptually similar to those for France. The restaurants are those that were mentioned in the Bond novels; the data come from the Michelin Guides for Great Britain and Ireland; and the reported prices were adjusted for the VAT, wine consumption, and service charges to obtain a price *compris* similar to those for France. The details can be found in the appendix to this paper.

weakening of the Pound relative to the Euro. The comparison using relative restaurant prices can be made for only a shorter time period, from 1976 on, due to a lack of restaurant prices in the UK for years prior to that. Over that entire period, 1976-2019, the British traveler benefitted slightly as the RP fell by 0.12 percent per year, a result very close to that found using the French and UK general CPIs. In the Franc portion of this period, the British traveler fared well as the RP fell at 1.3 percent per year, but the result for the Euro portion offset this as the RP rose by 1.5 percent per year.

The trends in the relative Restaurant Prices series also tell us something about the purchasing power parity puzzle, specifically, deviations from the law of one price. According to the strictest version of the law of one price, for the *ith* good (in this case, a meal at a Michelin Guide restaurant at which Bond dined), the UK domestic price should be given by:

$$BP_{it} = FP_{it} * (\pounds/FF)_t \text{ or } (\pounds/Euros)_t \quad (2)$$

where  $FP_{it}$  is the French price of a comparable meal in either Francs or Euros. And

$$\Delta \ln BP_{it} - \Delta \ln FP_{it} = \Delta \ln (\pounds/FF)_t \text{ or } \Delta \ln (\pounds/Euros)_t \quad (3)$$

As Fackler and Goodwin note in their review of spatial price analysis, “The LOP is more strongly supported for traded than non-traded goods” (2001, p. 975). Clearly, commodity traders do not typically look for arbitrage opportunities in turbot poche with sauce mousseline; however, Fackler and Goodwin also note that “Economic integration may cause price co-movement” even in the absence of arbitrage (2001, p. 979). “At issue is the extent to which firms located in

spatially separated regions actively compete” (2001, p. 974). We do not have a British restaurant price series comparable to that for France for the period 1953-1976, so we cannot assess the law of one price during the Fleming era as well as we would like. Nevertheless, if French prices were initially greater than British prices immediately prior to the events that took place in *Casino Royale*, when the Bond era began, then the subsequent trends in the French restaurant prices vis-à-vis the UK-CPI ran counter to the law’s prediction; equation (3) was violated. In the years after 1976, however, the evidence suggests the law of one price was working, perhaps not perfectly, but the adjustments of domestic restaurant prices were moving in the right direction. French restaurant prices were above British at the start of the period by around 30 percent and the gap narrowed to 16 percent by the end of the Franc era and a bit further to only 9 percent in 2019.<sup>33</sup>

The likely divergence between French and British restaurant prices during the early part of the Franc-era, and slow convergence afterwards, is entirely consistent with the reputations of restaurateurs in the two countries at the time. There is a reason Fleming put so much thought into Bond’s *French* dining experiences, though Bond himself could be charitable in his appraisal of high-end English dining.<sup>34</sup> Of course, as suggested by Fackler and Goodwin, restaurant dining might be an example of exactly the type of situation in which one would expect divergence from the law of one price. More generally, divergence from purchasing power parity

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<sup>33</sup> There was noticeable divergence for much of the Euro era, and substantial convergence of prices after 2016.

<sup>34</sup> In *Moonraker*, while dining at Blades, a private London club, Bond claims “The best English cooking is the best in the world.” However, in *You Only Live Twice*, when Blades undergoes its annual late-summer closure, he notes that the members will be forced “to pig it for a month at Whites’ or Boodle’s” (1955, p. 40; 1964, p. 16), hardly a recommendation for dining at two otherwise highly respected establishments.

reflects the prices of non-tradable inputs, such as expertise in the kitchen, the quality of locally-sourced inputs, profit margins associated with local market power, and so forth (Rogoff 1996, pp. 649-50), some of which were surely present in the difference between French and British restaurant prices.<sup>35</sup> The fact that the British restaurant prices fared better during the late part of the Franc era and in the Euro era, may reflect the emergence of the British food Renaissance (Hayward 2011), a period in which the national reputation of British cuisine improved.<sup>36</sup> In fact, the rise of British high-quality restaurants can be seen in the Michelin Guides as well. British and Irish restaurants were awarded only 25 stars in 1974; that number had jumped to 176 in 2012.<sup>37</sup> Of course, as Fackler and Goodwin also suggest, this may reflect the closer economic integration between Britain and Europe over the course of Bond's career. "In the 1960s Britain had closer trading relations with countries outside Europe, notably the Commonwealth nations. Since then trade has strongly re-oriented towards Europe;" for example, the share of total UK exports going to the original EEC members increased by fifty percent between the 1960s and the 1990s (Winters 2016, p. 1).

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<sup>35</sup> The classic example of deviations in the law of one price for a good that, on the surface, appears to be standardized is a McDonalds' Big Mac. Rogoff notes that the price of a Big Mac in Switzerland is five times greater, as measured in U.S. Dollars, than it is in China (1996, p. 649). Taylor and Taylor (2004, p. 136) make the same point with Big Macs and "tall lattes".

<sup>36</sup> Indeed, a recent article in the Guardian ("Looking for the finest French restaurants? Go to London, not Paris") suggests the British have surpassed the French in French cuisine.

<https://www.theguardian.com/food/2021/oct/14/looking-for-the-finest-french-restaurants-go-to-london-not-paris-jay-rayner>.

<sup>37</sup> The result we have found may also reflect differences between the type and quality of the restaurants in which Bond dined in the two countries. We are collecting data on a larger sample of only comparably high quality restaurants in both countries, namely those that held 3 stars in the Michelin Guide at some point in time, to better assess this.

## Conclusions

Ian Fleming created James Bond, one of the best known, and most profitable fictional characters of the second half of the twentieth century. Bond traveled often to all corners of the globe, and the novels record his having dined more than 500 times in over 40 countries across five continents. A large share of his dining took place in France and the UK; in these two countries the Bond novels mention 150 meals. We have constructed a data set, with menu prices, drawn from the identifiable restaurants at which the literary Bond dined in France and the UK, most of which are still in operation, and most of which have been listed in the Michelin Guides at one time or another. Thus the Guides provide us with a source for menu prices from restaurants in these two countries. The data we compiled on the menu prices of these restaurants, yields one of the few price series representing luxury services. This series enabled us to calculate a real exchange rate based on prices more pertinent to international travelers, such as Bond. We also compiled a time series on the salary of a class of workers employed in the British Civil Service at Grade 7 from 1953 to 2019. The comparison of these two series is couched in terms of Bond's history, but it also shows how middle class Civil Servants interested in traveling to the continent fared over time in both the years before the UK joined the EU and thereafter.

Broadly speaking, our results indicate that over the entire period changes in the British exchange rate were not favorable for Bond, or British travelers more generally. They benefited somewhat from a strengthening of the Pound during much of the Franc era, but suffered considerably from a weakening of it during the Euro era. Moreover, French restaurant prices increased as well. The combination of these two factors resulted in prices rising faster than Bond's salary by nearly one percent per year. As measured by a luxury basket of goods that included a weekly dinner and wine for two at a French restaurant, Bond, early on in his career,

i.e. during the Fleming era of the 1950s and 1960s, would have spent 18 percent (using current exchange rates) of his salary, whereas over the course of the Euro era that same basket would have required on average 26 percent of his salary. And at the end of the period, Bond would have needed a third of his salary to dine well regularly in France.

Our data also enabled us to examine the impact of using different price series to calculate the real exchange rate, or the exchange-rate-adjusted price ratio. The differences are substantial. Not only are magnitudes of the growth rates changed, the direction is reversed in some cases. The real exchange-rate calculated using the more general price indexes declined during the Franc era; while in the Euro era, it increased by 1.1 percent per year. If we substitute the French restaurant price index for the more general French CPI, the results are less favorable for British travelers in both the Franc and Euro eras, and substantially so. In the Franc era the real exchange-rate increased at 1.6 percent per year; while in the Euro era the real exchange rate increased even more rapidly at nearly 2.0 percent per year. For the period since 1976 we are able to use what we think is a more appropriate relative price index for travelers, namely that for restaurant prices in the two countries. In the Franc portion of the period, a British traveler would have been slightly better off as the rate fell at 1.3 percent per year, a bit faster than indicated by the two general price indexes. In the Euro era, however, British travelers would have been noticeably worse off as the real exchange rate rose at 1.5 percent per year.

Finally, our data indicate a likely violation of the law of one price.<sup>38</sup> This finding is consistent with the relative reputations of British and French fine dining during the period.

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<sup>38</sup> This is perhaps not surprising, as Williamson notes, “The Law of One Price has probably been more thoroughly discredited by empirical evidence than any other proposition in the history of economics” (1986, p.168).

Fleming, writing in the 1950s and 1960s, emphasized French restaurants precisely because of their reputations for quality, and the trends in relative prices reflect that choice. However, the movements in the restaurant price data for more recent decades are consistent with the recognized relative improvement in high-end British dining over the period.



Table 1								
Luxury Service Prices: Average Carte Prices and Carte Prices <i>Compris</i> , 1953-2019								
Year	Carte Prices: include VAT, but exclude wine and service <b>(Estimated using a constant wine cost percentage)</b>				Carte Prices <i>Compris</i> : include wine, VAT and service		Carte Prices <i>Compris</i> : include wine, VAT and service <b>(trended wine cost percentage)</b>	
	in Local Currency		in British Pounds		in British Pounds		in British Pounds	
	FFs	Euros	current exchange rates	£s valued at constant exchange rate	current exchange rates	£s valued at constant exchange rate	current exchange rates	£s valued at constant exchange rate
1953	13.02		1.32	1.25	2.53	2.39	2.20	2.08
1954								
1955	13.49		1.38	1.29	2.65	2.48	2.31	2.16
1956								
1957								
1958								
1959								
1960	20.15		1.46	1.93	2.81	3.70	2.48	3.27
1961								
1962								
1963								
1964	27.19		1.99	2.61	3.81	5.00	3.40	4.46
1965								
1966								
1967	32.76		2.42	3.14	4.64	6.02	4.18	5.42
1968								
1969								
1970								
1971	45.21		3.36	4.33	6.44	8.31	5.85	7.55
1972	47.18		3.74	4.52	7.17	8.67	6.53	7.90
1973	51.55		4.74	4.94	9.09	9.47	8.30	8.65
1974	58.31		5.18	5.59	9.94	10.72	9.10	9.81
1975	63.23		6.65	6.06	12.74	11.62	11.67	10.64
1976								
1977	81.94		9.55	7.85	18.32	15.06	16.88	13.87
1978	89.08		10.32	8.54	19.79	16.37	18.31	15.14
1979	102.09		11.30	9.78	21.68	18.76	20.10	17.40
1980	111.78		11.37	10.71	21.81	20.54	20.25	19.07
1981	125.84		11.43	12.06	21.92	23.13	20.34	21.46
1982	139.41		12.12	13.36	23.25	25.62	21.73	23.95
1983								
1984								
1985	213.80		18.36	20.49	35.21	39.30	33.16	37.01
1986								
1987								
1988	251.89		23.73	24.14	45.51	46.30	43.22	43.96
1989								
1990	289.31		29.77	27.72	57.10	53.17	54.51	50.76
1991	303.98		30.46	29.13	58.42	55.87	55.92	53.48
1992								
1993	311.88		36.64	29.89	70.28	57.32	67.64	55.17
1994								
1995	298.55		37.92	28.61	72.73	54.87	70.38	53.10
1996								
1997	327.02		34.19	31.34	65.58	60.10	63.82	58.49
1998								
1999	360.87		36.25	34.58	69.52	66.33	68.03	64.91
2000	364.60		33.77	34.94	64.77	67.01	63.56	65.76
2001	403.11		38.20	38.63	73.26	74.09	72.10	72.91



Table 2							
Nominal and Real Salaries for Bond and UK Average Earnings, 1953-2019							
Year	Nominal Annual Salary in £s			Retail Price	Real Annual Salary in £s		
	Bond's Median	Bond Upper Quartile	UK Average Earnings	Index 2010=100	Bond's Median	Bond Upper Quartile	UK Average Earnings
1953	1,500	1,922	400	4.59	32,666	41,854	8,711
1954	1,500	1,922	414	4.68	32,031	41,041	8,841
1955	1,500	1,922	434	4.89	30,694	39,328	8,887
1956	1,500	1,922	478	5.14	29,200	37,414	9,303
1957	1,500	1,922	489	5.32	28,206	36,140	9,188
1958	1,500	1,922	514	5.49	27,332	35,021	9,373
1959	1,500	1,922	535	5.51	27,218	34,875	9,713
1960	1,638	2,099	545	5.57	29,415	37,689	9,790
1961	1,788	2,291	562	5.76	31,047	39,781	9,758
1962	1,953	2,502	633	6.01	32,490	41,629	10,538
1963	2,132	2,732	652	6.12	34,821	44,615	10,650
1964	2,328	2,983	706	6.33	36,794	47,144	11,157
1965	2,542	3,257	751	6.62	38,385	49,183	11,347
1966	2,775	3,556	798	6.88	40,323	51,666	11,598
1967	3,030	3,883	829	7.06	42,900	54,968	11,730
1968	3,309	4,240	895	7.39	44,757	57,347	12,103
1969	3,613	4,629	962	7.79	46,379	59,426	12,354
1970	3,945	5,055	1,080	8.29	47,592	60,980	13,024
1971	4,448	5,700	1,202	9.07	49,040	62,835	13,253
1972	4,760	6,099	1,351	9.72	48,979	62,757	13,904
1973	4,962	6,358	1,539	10.60	46,802	59,968	14,513
1974	5,839	7,481	1,809	12.30	47,456	60,805	14,703
1975	7,532	9,651	2,291	15.29	49,277	63,138	14,991
1976	7,532	9,651	2,651	17.81	42,281	54,175	14,883
1977	7,532	9,651	2,894	20.64	36,497	46,764	14,023
1978	8,825	11,307	3,269	22.35	39,487	50,595	14,627
1979	9,620	12,326	3,775	25.34	37,958	48,635	14,895
1980	11,879	15,221	4,542	29.90	39,729	50,904	15,188
1981	15,175	19,444	5,129	33.45	45,365	58,126	15,333
1982	16,123	20,659	5,613	36.33	44,379	56,863	15,449
1983	16,839	21,576	6,087	38.00	44,316	56,782	16,020
1984	17,681	22,655	6,452	39.89	44,324	56,793	16,175
1985	18,565	23,787	6,997	42.32	43,870	56,211	16,534
1986	19,679	25,215	7,551	43.76	44,973	57,623	17,257
1987	20,520	26,293	8,140	45.58	45,017	57,681	17,857
1988	22,177	28,416	8,853	47.82	46,380	59,426	18,514
1989	22,855	29,284	9,663	51.54	44,347	56,822	18,751
1990	24,340	31,187	10,601	56.41	43,147	55,284	18,791
1991	26,408	33,837	11,417	59.72	44,218	56,656	19,116
1992	28,125	36,037	12,088	61.96	45,394	58,164	19,511
1993	29,883	38,290	12,447	62.94	47,476	60,831	19,774
1994	30,481	39,056	12,900	64.46	47,285	60,586	20,011
1995	33,161	40,159	13,302	66.70	49,719	60,210	19,944
1996	34,869	42,228	13,777	68.31	51,048	61,820	20,169
1997	35,911	43,489	14,367	70.45	50,973	61,730	20,393
1998	35,836	45,925	15,098	72.87	49,181	63,028	20,720
1999	36,899	47,288	15,825	73.99	49,872	63,913	21,389
2000	37,806	48,440	16,276	76.18	49,629	63,590	21,366
2001	39,346	50,414	17,108	77.53	50,752	65,029	22,067



Table 3										
Bond's Salary and Annual Cost of Dinner for Two: Averages by Author Era										
Cost of Dinner <i>Compris: Var.A</i>										
Cost of Dinner <i>Compris Var.B</i>										
Bond's Annual Salary			including a constant percentage wine cost		Cost as % of Bond's Salary		including a trended percentage wine cost		Cost as % of Bond's Salary	
	Nominal	Real (in 2010 prices)	at current exchange rates	at constant exchange rates	at current exchange rates	at constant exchange rates	at current exchange rates	at constant exchange rates	at current exchange rates	at constant exchange rates
Author Era	£	£	£	£			£	£		
Fleming 1953-67	1,912	32,901	342	408	17.9%	21.3%	304	362	15.9%	18.9%
Gardner 1981-96	23,555	45,704	4,997	4,623	21.2%	19.6%	4,771	4,407	20.3%	18.7%
Benson 1997-2002	37,773	50,370	7,393	7,276	19.6%	19.3%	7,254	7,141	19.2%	18.9%
Euro Era 2002-19	48,603	47,799	12,838	10,266	26.4%	21.1%	13,023	10,399	26.8%	21.4%

### Notes for Table 3

See text and appendix for the details of estimation.

Cost of dinner includes wine, VAT and service, and is calculated for two people once a week for a year. Wine was estimated as 67% of the food cost in Var. A, and in Var.B the percentage was increased at 0.7 percent per year.

The constant exchange rate is the average for 1999-2001

Table 4					
Rates of Growth of Relative Prices, the Exchange Rate and the Exchange Rate-adjusted Prices Using Various Relative Price Indices					
<i>Average Rates of Change by Selected Time Periods, 1953-2019</i>					
	1953-2001	1976-2001	2002-2019	1953-2019	1976-2019
	FF era	FF era	Euro era	Linked	Linked
<b>Exchange Rate-adjusted Prices (RP)</b>					
CPI-France/ CPI-UK	-0.59%	-1.13%	1.13%	-0.11%	-0.17%
French restaurant prices/ CPI-UK	1.57%	0.98%	1.93%	1.80%	1.58%
French restaurant prices/ UK restaurant prices	NA	-1.31%	1.50%	NA	-0.12%
<b>Relative Prices Indexes</b>					
CPI-France/ CPI-UK	-0.45%	-0.32%	-0.82%	-0.53%	-0.49%
French restaurant prices/ CPI-UK	1.71%	1.79%	-0.02%	1.38%	1.25%
French restaurant prices/ UK restaurant prices	NA	-0.50%	-0.45%	NA	-0.44%
Exchange Rates £/FFS and £/Euros	-0.14%	-0.81%	1.95%	0.42%	0.33%

#### Notes and Sources to Table 4

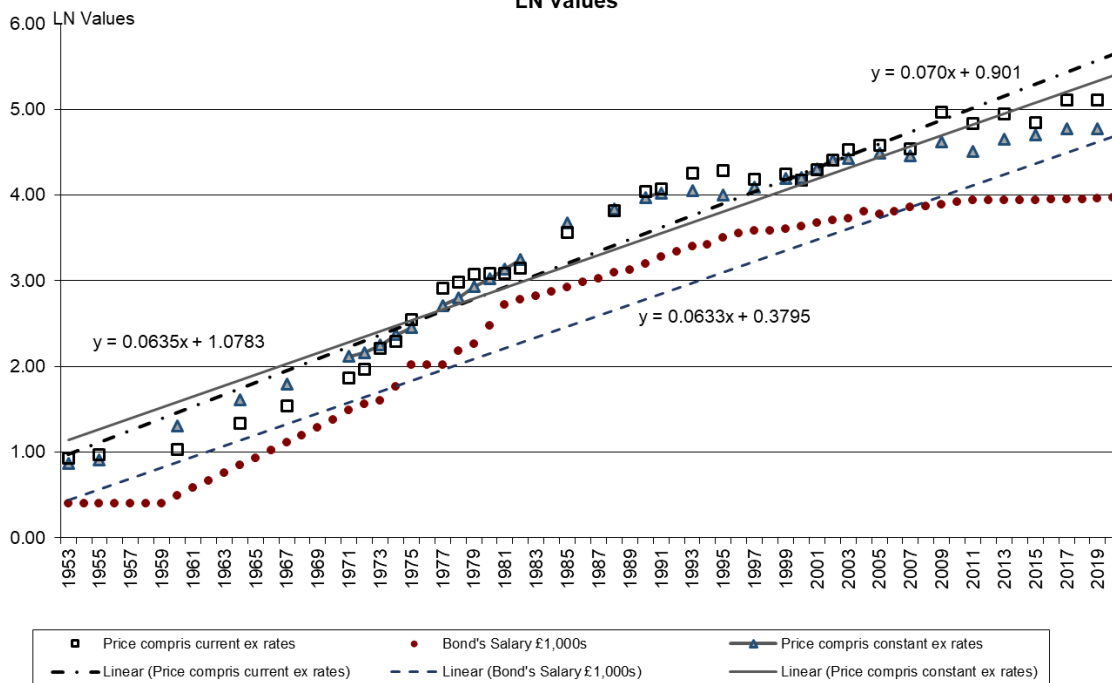
In each of these variants the exchange rate £/FFs or £/Euro is weighted by the relative price series shown in the column heading

CPI = Consumer Price Index

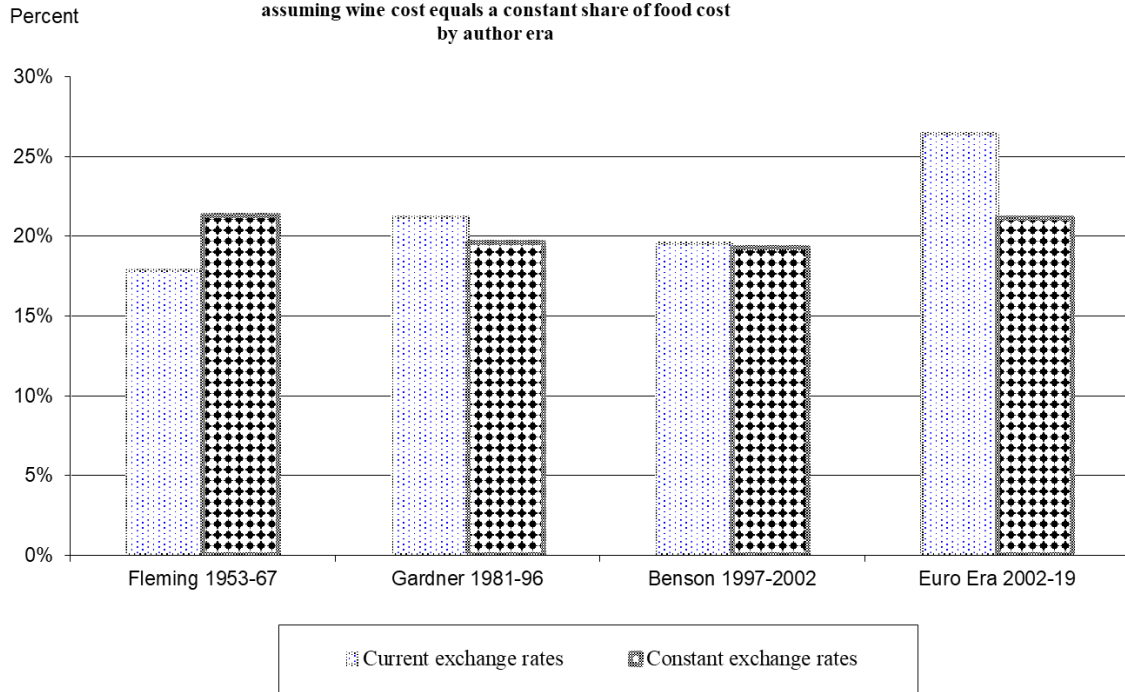
In order to calculate growth rates from 1953 or 1976 to 2019, we derived a linked series by extrapolating the £/Euro rates backward in time based on the £/FFs rates. And we estimated the French restaurant price for 1976 as the average of those for 1975 and 1977.

We used the French restaurant price series with wine costs equal to a constant percentage of food costs.

**Figure 1**  
**Average Low Carte Prices *compris* at constant and current exchange rates**  
**and Bond's Salary (1000s) in British Pounds**  
**LN values**

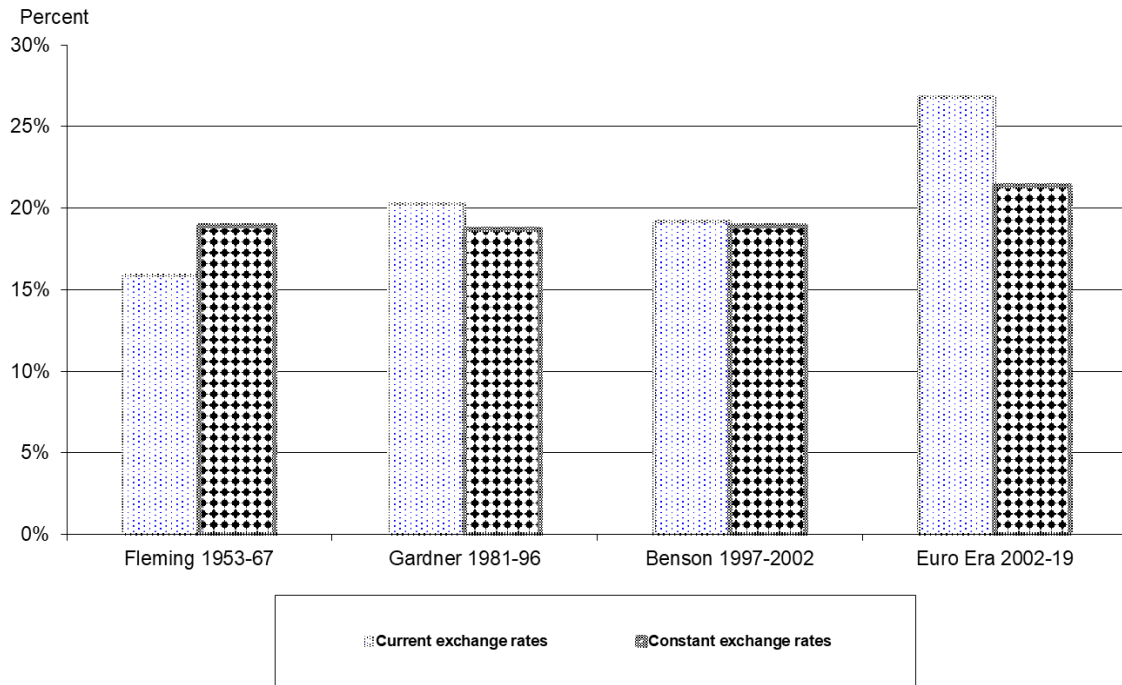


**Figure 2A**  
**Percent of Income spent dining once a week with a Bond girl**  
**at current and constant exchange rates,**  
**assuming wine cost equals a constant share of food cost**  
**by author era**





**Figure 2b**  
**Percent of Income spent dining once a week with a Bond girl, by author era**  
**at current and constant exchange rates,**  
**Assuming a trend of 0.7% in wine costs as a share of food costs**



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