

# **The business impact of pharmacy registration fees on registered pharmacies in Great Britain**

January 2020

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# 1. Introduction

## 1.1 Background

The General Pharmaceutical Council (GPhC) is the regulating body that sets professional standards for pharmacists, pharmacy technicians and pharmacies in Great Britain. Some of the key services provided by GPhC include conducting routine, intelligence-led and themed inspections for member pharmacies to ensure a safe and effective service is being delivered to the public. GPhC charges all member pharmacies a renewal fee of £262 for each of their premises annually to meet the associated costs of regulatory activities. However, this fee and other revenue streams (e.g., personal registration) have been insufficient for GPhC to break even financially, with the GPhC having reported growing operating losses and net cash outflows over the past 2 years. While the regulator has sought to improve efficiency, increasing fees to meet the costs of regulation and monitoring may be required for the GPhC to meet its costs. This study assesses the impact of current fees and a potential fee increase of £103 (to £365) for premises on the financial health of pharmacies that are registered with GPhC.

According to the pharmacy register published on GPhC's website (<https://www.pharmacyregulation.org/register>), there are 14,313 registered pharmacies across Great Britain. For the purposes of our study, we have stratified these by the number of premises they operate using definitions provided by the GPhC. The purpose of stratification is to allow us to analyse whether certain segments of the market may be disproportionately affected by the proposed fee change. The strata used are: Large Pharmacy Chains (LPCs), Medium-sized Pharmacy Chains (MPCs) and Small/Independent Pharmacies, which are further subdivided into those which are geographically isolated (ISIPs), and those which are not (SIPs). We have defined ISIPs as pharmacies that are independently owned and are the only pharmacy operating in a given town. We have made this distinction as the financial sustainability of services in areas which have a limited supply of pharmacy services may be of particular interest when considering fee increases.

**Table 1: Pharmacy strata summary**

Group	Count
LPCs (9+ premises)	8,236 premises owned by 81 companies
MPCs (2-9 premises)	2,766 premises owned by 944 companies
SIPs (1 premise, not isolated)	3,208
ISIPs (1 premise, isolated)	103
<b>Total</b>	<b>14,313</b>

The GPhC has informed us that included in the above statistics are premises from which online only (i.e., with no high-street presence) pharmacies operate. As we were unable to identify these directly from the publicly available register for the purposes of our study, the GPhC has identified a number of these for analysis as a separate grouping; Online Pharmacies (OLPs).

## 1.2 Scope of the study

The three key objectives of the study were to understand:

1. The estimated impact of existing fees on the financial viability of safe and effective pharmacy service provision.
2. The estimated impact a £103 increase may have on the financial viability of pharmacies providing these services.
3. The benefits the services provided by the GPhC may yield for the operators of registered premises and society more broadly in qualitative terms.

We have undertaken a financial impact analysis for objectives (1) and (2), and a literature review in order to consider objective (3).

As part of undertaking an analysis of the potential impact of future fee increases on registered pharmacies, we seek to understand the most recent financial performance and position of a sample of registered pharmacies. In this context, we consider the impact of current fee levels on financial viability, which we supplement by performing an analysis of the impact of an increase of £103 per premise across the above strata.

Our sample, as described in the Financial Impact Analysis section of this document, comprises 33 companies/pharmacy chains (five LPCs, five MPCs, 10 SIPs, 10 ISIPs and three OLPs) out of 4,336 companies/groups (less than 1%) nationally. However, these companies/groups represent 38% of registered pharmacy premises nationally (5,465 out of 14,313 premises), as a large number of premises are operated by LPCs.

As these groups report their financial performance at an aggregate level, it is not possible for us to analyse the financial performance of individual premises within them. As such, our findings are limited to providing an indicative rather than a comprehensive view of the financial landscape of the pharmacy market. In particular, our analysis provides an estimate of the impact of registration fees on reported surplus/deficit at a group but not individual premise level.

There is limited literature on the impact of pharmacy sector regulation and, as such, we consider analogues where evidence exists for the impact of regulation, inspection and accreditation on consumers and businesses.

The remainder of this document covers:

- ▶ Key findings from both parts of the study.
- ▶ Further detail of our financial impact analysis, including our methodology.
- ▶ Further detail of our literature review, including our methodology.

## 2. Key Findings

This section sets out key findings from our financial analysis and literature review, which are described in greater detail in sections 3 and 4 respectively, along with method statements.

### 2.1 Financial analysis

A review of financial information and a financial impact analysis of pharmacies was conducted for a limited sample of pharmacy groups across different strata. Our analysis covered five LPCs, five MPCs, 10 SIPs, 10 ISIPs and three OLPs. The key metric we calculated across all strata was registration renewal fees (current and in the scenario of a £103 increase per premise) as a percentage of surplus/deficit in absolute terms\*.

\* Where summing surplus and deficit for comparison to fee, we have used the absolute value, so both surpluses and deficits are presented as positive numbers. This is because where we are calculating fees divided by surplus or deficit, summing together a combination of positive and negative numbers for the denominator of that calculation would cancel each other out, skewing the resultant metric when used to consider the magnitude of fees in relation to financial performance. See Appendix B for further detail. Ideally, fees would have been compared to revenues, which are always a positive number and in general more consistent year to year than surplus/deficit, but this was not possible as only the LPCs consistently published full accounts with these figures available.

Table 2 summarises the key findings within our sample, with further detail set out in Section 3 and Appendices A and B:

- ▶ For most organisations, full annual accounts were not available publicly, and therefore comparisons to revenue can only be made for the LPCs, for which current fees were on average 0.02% of revenues.
- ▶ Two of five LPCs and two of five MPCs were in financial deficit in 2018.
- ▶ This was lower in proportionate terms than for SIPs and ISIPs collectively (10 of 20) and ISIPs taken alone (seven of 10) but higher than SIPs taken alone (three of 10).
- ▶ All three of OLPs were in deficit, which may be due in part to accounting adjustments as, for two of the three online pharmacies, cash in bank increased over the same periods as the reported deficits, which may suggest underlying financial surpluses.
- ▶ Registration fees were a smaller proportion of the absolute level of surplus/deficit for LPCs and MPCs (0.29% and 0.34% respectively), than for SIPs and ISIPs (0.49% and 0.79% respectively).
- ▶ For OLPs, the fee was 0.01% of surplus/deficit, although this may again reflect in part non-cash accounting adjustments. They were, however, also less than 1% of cash in bank (another measure of the financial scale and sustainability of an organisation).

**Table 2: Pharmacy sample summary**

Segment	Number of organisations in sample	Number of organisations in surplus	Number of organisations in deficit	% of organisations in deficit	Number of premises	Total absolute surplus/deficit (£'000)*	Sum of fees paid (2018) £'000	Fees as % absolute of surplus/deficit	Total absolute surplus/deficit (£'000)* -Forecast	Fees modelled (2018+£103 per premise)	Fees modelled as % of absolute surplus/deficit
LPC	5	3	2	40%	5,424	493,958	1,421.1	0.29%	493,831	1,979.7	0.40%
MPC	5	3	2	40%	18	1,401	4.7	0.34%	1,401	6.5	0.47%
SIP	10	7	3	30%	10	532	2.6	0.49%	531	3.6	0.69%
ISIP	10	3	7	70%	10	330	2.6	0.79%	330	3.6	1.11%
OLP	3	0	3	100%	3	12,284	0.8	0.01%	12,284	1.0	0.01%
<b>Total</b>	<b>33</b>	<b>16</b>	<b>17</b>	<b>52%</b>	<b>5,465</b>	<b>508,504</b>	<b>1,431.8</b>	<b>0.28%</b>	<b>508,377</b>	<b>1,994.7</b>	<b>0.39%</b>

The findings in Table 2 suggest:

- ▶ Current fee levels are not a major driver of financial performance, being less than 1% of average surplus/deficit for each pharmacy strata and 0.02% of revenue for LPCs (for which revenue information was available). It should be noted that for LPCs and MPCs we were not able to view financial performance of individual premises and therefore we are not able to comment upon the impact on surplus/deficit at this disaggregated level.
- ▶ Future fee increases of £103 also do not appear to have a significant impact on financial performance as the fee would remain less than 1% of the average surplus/deficit for each stratum, other than ISIPs, for which it would be 1.1%.
- ▶ However, the sector is demonstrating a notable fragility, with 52% of organisations in deficit across our sample. As noted in the accounts of one of the LPCs for 2018, this is reflective of a challenging environment which included changes to funding available to pharmacies in England and reductions in drug reimbursement. Rising business rates and the impact of business rates on smaller businesses are also well-known challenges facing high-street businesses in general<sup>1</sup>.
- ▶ This suggests that, while registration fee rises may not be a major driver of financial performance, the fragility of the system means care should be taken when considering the extent of fee rises, and that a policy where differential fees are considered for segments of the market based on their ability to absorb them may be required. It does not necessarily follow that this differentiation would need to be on a similar basis to the stratification used in our analysis (chain size) but may consider other factors, e.g., prescription volumes, range of services offered and whether local supply is dependent on single isolated pharmacies.
- ▶ It is of note that ISIPs were more likely to be in deficit and registration fees were a larger proportion of their surplus/deficit on average than other strata, and as such future policy should consider the sustainability of services in areas served by a single pharmacy.

<sup>1</sup> (<https://www.fsb.org.uk/media-centre/press-releases/inquiry-into-unfair-business-rates-system-welcomed-by-small-firms>)

## 2.2 Literature review

While our financial analysis focused on the cost of registration fees and their impact on pharmacy surplus/deficit, our literature review focuses on understanding the benefits regulation by the GPhC might bring to these businesses and the wider public. No literature was identified pertaining specifically to the impact of regulation in the pharmacy sector; therefore, our analysis identified analogues for the activities of the GPhC from other sectors. Evidence from these sectors was used to draw general inferences. We found:

- ▶ **Regulation can improve consumer confidence and reduce the effects of information asymmetry:** Information asymmetry can cause market failure, where consumers cannot distinguish “good” and “bad” products, and “bad” products eventually “chase out the good” (as documented in George Akerlof’s “The Market for Lemons” in 1970). The Local Better Regulation Office (2012), suggests that regulation can provide consumers with good quality products and prevent inferior products from entering the market, thus reducing the impact of information asymmetry. The GPhC sets principles and standards for registered pharmacy premises and staff, including how they manage medicines and devices to safeguard health. These principles and standards, combined with other regulatory activities such as inspection and registration, may increase consumer confidence in respect of quality levels when accessing goods and services through a registered pharmacy.
- ▶ **Accredited services can attract higher prices:** According to Frenz M. and Ray L. (2013) – drawing from a survey conducted to assess the impact of accreditation and infrastructure quality – prices for accredited services were higher than that for non-accredited services, on average by an estimated 8%. This means increased consumer confidence from the principles, standards and regulatory activities described above may result in an increased willingness to pay for products sold by pharmacies – especially as the term “pharmacy” is a protected title in law, with only registered pharmacies allowed to brand themselves as such.
- ▶ **Encouraging training can improve industry wide productivity and governance:** The Chartered Institute of Building (CIOB), (2015), suggests that professional bodies improve industry wide productivity and governance through research and training. Applying this to the pharmacy sector, the GPhC’s requirements for evidence of appropriate qualifications for registered pharmacists and technicians, along with setting standards for the number and qualification mix of staff, may help improve efficiency and thereby reduce the operating costs and business risks faced by pharmacies.
- ▶ **Regulation, inspection and accreditation can make a contribution to the wider economy:** The National Association of Testing Authorities of Australia (NATA), (2017) lists the importance of accreditation at a company, industry and economy level. The study estimates the economic value of NATA’s contribution to the Australian economy highlighting activities such as setting standards and improving quality – analogous to the role of the GPhC – as key contributors to its overall economic impact.



### 3. Financial Impact Analysis

This section sets out in greater detail the methodology and findings of our financial impact analysis of current and potential future registration fees.

#### 3.1 Methodology

In estimating the impact of current registration fees and a potential £103 fee increase, we selected a sample of pharmacies from the various strata (as described in section 1). The fees we estimated these pharmacies / pharmacy chains paid were compared against key financial metrics from their financial returns to Companies House. The analysis presented through this document is conducted using a sample of 33 pharmacies. The distribution of these across various strata is as follows:

**Table 3: Pharmacy sample selection by strata**

Group	Agreed sample size
LPCs (>9 premises)	5
MPCs (2-9 premises)	5
SIPs (1 premise)	10
ISIPs (1 premise)	10
OLPs (1 premise serving online customers only)	3
<b>Total Sample</b>	<b>33</b>

We have anonymised the findings in this document, with details of the pharmacies included in the sample and links to their financial returns held on file.

##### 3.1.1 Criteria for sample selection

- ▶ For LPCs, the largest chains comprise a significant proportion of the overall market. As a broad coverage of the market was desirable for the analysis, the top five companies by number of premises was taken as the sample as opposed to performing random sampling. Adjustments to the sample selection were made for chains where pharmacy activities could not be disaggregated from other activities in the annual accounts, as explained in more detail later in this section.
- ▶ For MPCs and SIPs, random sampling was used to select the sample, as described in further detail later in this section.
- ▶ ISIPs were defined as pharmacies that are independently owned and are the only pharmacy operating in a given town. 103 of these were initially identified, but a geographical analysis found that a large proportion of these were relatively close to other pharmacies in nearby towns and therefore in effect not 'isolated'. We excluded these pharmacies, thereby further narrowing this stratum to 50 pharmacies<sup>2</sup>. Random sampling was used to select the sample from these fifty pharmacies. It should be noted that in reality there may exist geographically isolated pharmacy premises which are part of LPCs or MPCs, but as standalone financial information is not available for such premises, they are not included in this grouping.

<sup>2</sup> An exclusion criterion was applied for pharmacies with limited financial information available in Companies House UK. Where pharmacies were excluded on this basis, the sampling process was repeated to obtain a suitable replacement.

- ▶ OLPs in Great Britain are also liable to pay £262 per trading name for premises registration and renewal. Given the growing market penetration of online pharmacies in Great Britain, these were also included within this study. A sample of four pharmacies was suggested by GPhC. However, as one of the four had only recently been incorporated, no financial returns were available and it was therefore excluded from the analysis. Three OLPs remained in the sample.

### 3.1.2 Random sampling technique

Simple random sampling is a probability-based sampling procedure that gives every element in the target population an equal chance of being selected. This helps to conduct a study without human bias and helps to prevent skewed results. For stratified random sampling the entire dataset is segmented into different strata and random samples are picked from each.

As detailed above, for this study the strata used are LPCs, MPCs, SIPs, ISIPs and OLPs.

### 3.1.3 Final Selected Samples

The following table shows LPCs (pseudonymised through the sequence of their selection in the format Lx, with a similar naming convention used for the other strata) selected by market coverage. Upon review of company accounts, L5 was identified as a supermarket chain which reports its financials on a consolidated basis and hence due to data incomparability was removed from the sample.

As set out in the table below, L6 was excluded from the sample for the same reason as L5. L7 and L8 were both suitable candidates for inclusion as the fifth chain in the sample. As they operated the same number of premises (223 each), random sampling (as described under the Random Sampling Technique section of this document), was utilised to select between them and L7 was included in the sample.

**Table 4: Large pharmacy premises**

Pharmacy pseudonym	Count of premises 2018	Inclusion
L1	2344	Included
L2	1578	Included
L3	762	Included
L4	517	Included
L5	375	Excluded – pharmacy activity could not be disaggregated from supermarket activity
L6	256	Excluded – pharmacy activity could not be disaggregated from supermarket activity
L7	223	Included
L8	223	Excluded – random sampling used to select between L7 and L8 as fifth chain included in the sample

For MPCs sample selection was undertaken using random sampling and the following pharmacies were selected:

**Table 5: Medium pharmacies premises**

Pharmacy pseudonym	Count of premises 2018
M1	6
M2	2
M3	2
M4	2
M6	6

For the SIP and ISIP samples, selection was undertaken based on multistep random sampling, whereby if the required financial information was not available for pharmacies selected in the initial sample, these pharmacies were removed and a new sample was drawn to identify suitable replacements. This process was followed until the agreed sample size was reached.

**Table 6: Availability financial information**

Step/Category	Small		Small isolated	
	Found	Not found	Found	Not found
0	6	4	6	4
1	-	4	4	-
2	2	2	-	-
3	1	1	-	-
4	1	-	-	-

**Table 7: Final Small sample (10) and Small-isolated sample (10)**

Small Pharmacies		Small Isolated Pharmacies	
Pharmacy	Country	Pharmacy	Country
S1	England	SI1	Scotland
S2	England	SI2	England
S3	England	SI3	Scotland
S4	England	SI4	Scotland
S5	England	SI5	Wales
S6	England	SI6	Wales
S7	England	SI7	England
S8	England	SI8	England
S9	England	SI9	Wales
S10	England	SI10	Scotland

### 3.1.4 Additional notes/limitations of our approach

It should be noted that our analysis was undertaken based on annual accounts, which by their nature provide an aggregated view of financial activities and performance for a legal entity or group, and therefore do not allow for analysis of performance of individual premises within a group. For groups of companies with multiple lines of service, we analysed the accounts of the subsidiary we were able to identify as owning and operating pharmacies (we excluded from our samples companies where activities were not sufficiently disaggregated into separate subsidiaries to meaningfully isolate pharmacy activities). However, it is likely that even these subsidiaries will have a portfolio of activities which extends beyond core pharmacy services, e.g., sale of cosmetic and other consumer products, and it should be noted that this may have a bearing on the calculated financial metrics. This may mean the reported financial position for the organisations and scale of the registration fee in relation to them is affected by financial flows not related to the core pharmacy business and may distort comparisons between the different strata within our analysis.

Geo-mapping was undertaken to understand the geographical spread of premises for sampled LPCs, MPCs, SIPs and ISIPs, and is included in Appendix C.

## 3.2 Detailed analysis

Below we set out our detailed financial analysis for the selected sample of pharmacies/pharmacy chains. The financial information with which to conduct this analysis varied by strata, with LPCs publishing full accounts, while MPCs, SIPs and ISIPs being small

businesses and not publicly listed are exempt from doing so, and online pharmacies generally being newer businesses with fewer yeas of financial information available. For this reason our analysis in this section is grouped into the following sub-sections:

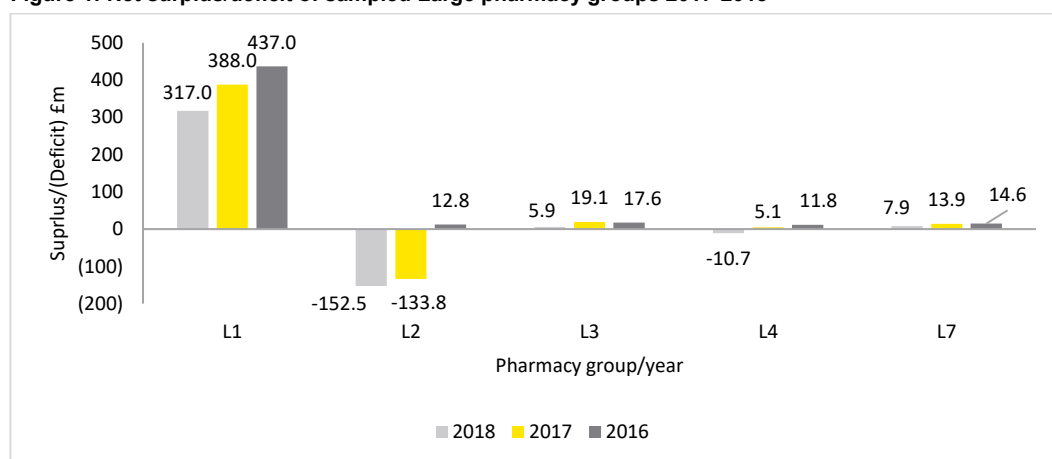
- ▶ LPCs
- ▶ MPCs, SIPs and ISIPs
- ▶ OLPs

Each of these subsections presents historical performance data followed by analysis of the impact of a £103 fee increase per premise. Our key metric in this analysis is fees paid as a percentage of surplus/deficit. For LPCs for which revenue information was available across the breadth of the sample, we also used this as a secondary comparator to fees. For all other strata, for which revenue information was not available, we used cash in bank as a secondary comparator as this is also a common measure of organisational size and sustainability.

### 3.2.1 Large Pharmacy Chains

- ▶ Since 2016 surplus/deficit position has in general been declining for all five organisations within this stratum (the only exception being an improvement for L3 in 2017). For 2018 two out of five organisations were in deficit.

Figure 1: Net surplus/deficit of sampled Large pharmacy groups 2017-2018



- ▶ Across the LPCs fees as a proportion of total revenue averaged 0.02%.
- ▶ Fees as a proportion of (absolute) surplus/deficit averaged 0.4%.

Table 8: Analysis of current fee impact for LPCs

Pharmacy pseudonym	Count of premises 2018	Fee as a % of revenue	Fee as a % of (absolute) surplus/ deficit	Fees paid (£m)
L1	2344	0.01%	0.27%	0.86
L2	1578	0.03%	0.38%	0.58
L3	762	0.04%	4.78%	0.28
L4	517	0.04%	1.78%	0.19
L7	223	0.02%	1.03%	0.08
<b>Total / Average</b>	<b>5424</b>	<b>0.03%</b>	<b>0.40%</b>	<b>1.98</b>

- ▶ As shown in Table 9 below, the impact of a fee-increase of £103 to £365 would have an estimated impact of between 0.08% and 1.36% change in surplus/deficit for the LPCs sampled (0.12% weighted average).

**Table 9: Surplus/deficit analysis of £103 fee increase for LPCs**

Pharmacy pseudonym	Base case surplus/deficit (£m)	Fee increase of £103 Scenario net surplus/ deficit (£m)	Change in net surplus/deficit (£m)	% change
L1	£317.00	316.76	(0.24)	(0.08%)
L2	(152.50)	(152.67)	(0.17)	(0.11%)
L3	5.90	5.82	(0.08)	(1.36%)
L4	(10.66)	(10.72)	(0.06)	(0.56%)
L7	7.89	7.87	(0.02)	(0.25%)

### 3.2.2 Medium Sized Pharmacy Chains and Small/Independent Pharmacies

- ▶ For the MPCs, two of the five reported net losses in 2018, though most experienced an improvement in the net surplus/deficit as compared to 2017 (see Appendix A).
- ▶ 3 out 10 SIPs reported net deficits for FY 2018.
- ▶ 7 out of 10 ISIPs reported net deficits for FY 2018.

**Table 10: Current state analysis for MPCs, SIPs, and ISIPs**

Indicator	Stratum	Min	Max	Average
Fee paid (£'000)	MPCs	0.52	1.57	0.94
	SIPs	0.26	0.26	0.26
	ISIPs	0.26	0.26	0.26
Fee as a % of cash	MPCs	0.3%	13.3%	3.6%
	SIPs	0.0%	5.6%	1.3%
	ISIPs	0.1%	262.0%	26.9%
Fee as a % of net surplus/deficit	MPCs	0.2%	1.7%	0.9%
	SIPs	0.2%	3.1%	0.9%
	ISIPs	0.3%	12.8%	3.4%

For SIPs and MPCs, the impact of a fee increase of £103 was within a similar range to the LPCs, 0.08%-1.17% of absolute surplus/deficit, as can be seen in Table 11. However, for ISIPs this range was larger, 0.11%-5.39%.

**Table 11: Surplus/deficit analysis for MPCs, SIPs, and ISIPs in £103 increase scenario**

Pharmacy pseudonym	Strata	Base case surplus/deficit (£'000)	Fee increase of £103 Scenario net surplus/ deficit (£'000)	Change in net surplus/deficit (£'000)	% change
M1	MPCs	(457.41)	(458.03)	(0.62)	(0.14%)
M2	MPCs	40.94	40.73	(0.21)	(0.51%)
M3	MPCs	31.49	31.28	(0.21)	(0.67%)
M4	MPCs	(67.89)	(68.1)	(0.21)	(0.31%)
M6	MPCs	803.37	802.75	(0.62)	(0.08%)
S1	SIPs	(96.14)	(96.24)	(0.1)	(0.10%)
S2	SIPs	21.82	21.72	(0.1)	(0.46%)
S3	SIPs	49.4	49.3	(0.1)	(0.20%)
S4	SIPs	8.56	8.46	(0.1)	(1.17%)
S5	SIPs	25.8	25.7	(0.1)	(0.39%)
S6	SIPs	(64.37)	(64.48)	(0.11)	(0.17%)

S7	SIPs	49.05	48.95	(0.1)	(0.20%)
S8	SIPs	117.63	117.53	(0.1)	(0.09%)
S9	SIPs	79.94	79.83	(0.11)	(0.14%)
S10	SIPs	(19.03)	(19.13)	(0.1)	(0.53%)
SI1	ISIPs	(47.12)	(47.22)	(0.1)	(0.21%)
SI2	ISIPs	(47.72)	(47.82)	(0.1)	(0.21%)
SI3	ISIPs	15.07	14.97	(0.1)	(0.66%)
SI4	ISIPs	(3.15)	(3.25)	(0.1)	(3.17%)
SI5	ISIPs	50.6	50.5	(0.1)	(0.20%)
SI6	ISIPs	(4.4)	(4.51)	(0.11)	(2.50%)
SI7	ISIPs	(97.41)	(97.52)	(0.11)	(0.11%)
SI8	ISIPs	10.07	9.96	(0.11)	(1.09%)
SI9	ISIPs	(52)	(52.11)	(0.11)	(0.21%)
SI10	ISIPs	(2.04)	(2.15)	(0.11)	(5.39%)

### 3.2.3 Online Pharmacies

- ▶ All three pharmacies selected in this sample incurred net losses in 2018. However, two of the three pharmacies are new in the market, such that market entry and start-up costs may be reflected in reported financial performance.
- ▶ ON1 reported revenue of £43m in 2018, an increase of 67% to the prior year. However, operating losses and net losses increased from £5m (2017) to £12m (2018).
- ▶ ON2 also incurred losses, but the losses have decreased from £1.50m (2017) to £0.15m (2018). ON2 has seen cash in bank decrease both years analysed.
- ▶ ON3 reported a loss of £236 in 2018 while they achieved a surplus of £834 in 2017. Cash in bank has increased each year for ON3.
- ▶ The impact of the current fee is 0%-0.2% of surplus/deficit for the two larger pharmacies (ON1, ON2).
- ▶ For ON3 the fee is 110.2% of surplus/deficit. Fees being large compared to a surplus/deficit could be misleading in terms of the significance of their impact (e.g., they may still be small compared to revenues and total costs) so as such (and in the absence of revenue data) we also compared the fees to the value of cash in bank. For ON3 we found that fees were 0.37% of cash in bank (more in line with the other organisations and lower than for SIPs, ISIPs and MPCs), and cash in bank had grown in both years analysed.
- ▶ The impact of a fee increase of £103 (0% and 0.1% for ON1 and ON2 respectively) is within the range for SIPs, ISIPs, MPCs or LPCs where analysed as a percentage of surplus/deficit. For ON3, it represents a 47% impact on surplus/deficit.

**Table 12: Current state/historical analysis for OLPs**

	Inc. Date	Net surplus/deficit (£'000)		Cash (£'000)			Fee paid (£'000)	Fee as a % of (absolute) surplus/deficit	Fee as a % of cash
		2018	2017	2018	2017	2016			
<b>ON1</b>	1999	(12,133)	(5,946)	20,900	614	656	0.26	0.0%	0.00%
<b>ON2</b>	2017	(150.4)	(1,507)	360	457	465	0.26	0.2%	0.07%
<b>ON3</b>	2014	(0.2)	0.8	71	43	19	0.26	110.2%	0.37%

**Table 13: Surplus/deficit analysis for OLPs in £103 increase scenario**

Pharmacy pseudonym	Base case surplus/deficit (£'000)	Flat fee-increase of £103 scenario surplus/deficit (£'000)	Change in surplus/deficit (£'000)	% change
ON1	(12,133)	(12,133)	(0.11)	(0.0%)
ON2	(150.4)	(150.5)	(0.11)	(0.1%)
ON3	(0.2)	(0.3)	(0.11)	(47.8%)

## 4. Benefits of Regulation, Inspection and Accreditation – Literature Review

This section sets out in greater detail the methodology and findings of our literature review as to the potential benefits of effective regulation, inspection and accreditation activities to pharmacies, and to society more broadly.

### 4.1 Methodology

We used search engines Google Scholar and Research Gate in addition to a more general internet search to identify relevant articles. As no articles were identified specific to the regulation of pharmacies, we focused on analogues from which inferences could be drawn. Keywords used in these searches were:

- ▶ Conformity assessment.
- ▶ Economic benefits of regulation/standardisation and accreditation.
- ▶ Kite marks & economic impact or benefit.
- ▶ Health & safety inspections & economic impact or benefit.
- ▶ Food standards and economic impact or benefit; professional body registration; and professional body accreditation.

Papers and websites identified through these searches were filtered through review of abstracts, titles and summaries to filter down to 18 papers for full review.

12 of the papers reviewed in full refer primarily to UK markets, three refer to the USA with a further paper referring to each of the EU, Canada and Australia.

On full text review 13 of these papers were used to inform our detailed findings, while no information we deemed pertinent to our study question was identified in the other five. Studies identified/included are listed in Table 14.

In addition to these studies, we utilised resources from the GPhC website to understand the GPhC's activities, the potential benefits of its work and how they may be analogous to the activities and benefits described in the above studies.

- ▶ GPhC site: <http://www.pharmacyregulation.org/>
- ▶ Standards for registered pharmacies (premises):  
[http://www.pharmacyregulation.org/sites/default/files/document/standards\\_for\\_registered\\_pharmacies\\_june\\_2018\\_0.pdf](http://www.pharmacyregulation.org/sites/default/files/document/standards_for_registered_pharmacies_june_2018_0.pdf)
- ▶ Standards for pharmacy professionals:  
[http://www.pharmacyregulation.org/sites/default/files/standards\\_for\\_pharmacy\\_professionals\\_wheel.pdf](http://www.pharmacyregulation.org/sites/default/files/standards_for_pharmacy_professionals_wheel.pdf)



**Table 14: Summary of articles identified by literature review**

Title	Main geography	Publisher	Included?
Economics for occupational safety and health	US	Research gate	Y
Principles for Economic Regulation	UK	BIS	Y
A short guide of regulations	UK	NAO	N
Regulation and Growth	UK	Local Better Regulation Office	Y
The Economic Contribution of Standards to the UK Economy	UK	Cebr	Y
The Economics of Standardization: An update	UK	Innovative Economics Limited	Y
Conformity Assessment and Accreditation policy in the UK	UK	BIS	Y
The Economics of Accreditation	UK	UKAS	Y
Economic Value of NATA Accreditation in Australia	Australia	University Technology Sydney	Y
Security Regulation, Conformity Assessment & Certification	EU	European Commission	Y
What Brexit means for regulated product conformity assessment	UK	BSI	N
Understanding the Value Of Professionals and Professional Bodies	UK	CIOB	Y
The Impact of Standardization on International Trade	UK	Research gate	Y
The effects of economic regulation	US	MIT	Y
Does accreditation stimulate change? A study of the impact of the accreditation process on Canadian healthcare organizations	Canada	IS	N
The Economics of Standardization	UK	University of Manchester	N
How we analyse the costs and benefits of our policies	UK	FCA	N
The Market for "Lemons": Quality Uncertainty and the Market Mechanism	US	MIT	Y

## 4.2 Detailed findings

Table 15 sets out key findings/themes from our literature review with supporting extracts from the articles identified.

**Table 15: Literature review detailed findings**

Finding	Relevance to pharmacy sector
<p><b>Regulation can improve consumer confidence and reduce the effects of information asymmetry:</b></p> <p>Information asymmetry can cause market failure, where consumers cannot distinguish “good” and “bad” products, and “bad” products eventually “chase out the good” as documented in Akerlof G. (1970).</p> <p>Swann P. (2010) highlights the importance of a regulator in preventing market failure.</p> <p>The Local Better Regulation Office (2012) suggests that regulation may provide consumers with good quality products and prevent inferior products from entering the market. Financial interests of consumers are also protected by regulators.</p>	<p>The GPhC sets out standards and principles for registered pharmacies. All five principles (under which the standards are grouped) make reference to the safety and wellbeing of patients, which in a healthcare setting is an important component of quality. Inspections are carried out on registered pharmacies to test compliance with these standards, and only registered pharmacies are allowed to use the title “pharmacy” in Great Britain. This suggests a consumer visiting a high-street or online pharmacy (marketing itself as such) in Great Britain has some assurance that the quality of service they receive will be of a certain level, in effect removing the “lemons” from the market.</p> <p>The GPhC undertakes initial and renewal processes for registration of premises, as well as inspections, which would be expected to prevent poor quality pharmacy premises entering/remaining on the market; improving consumer confidence and experience.</p>

Finding	Relevance to pharmacy sector
<p><b>Markers of quality such as the Kitemark can be important to consumers</b></p> <p>Hudson and Jones (2003) state that research for Kitemark found that about 82% of customers recognise the Kitemark symbol and, of these, 93% percent believe the product is safer due to carrying this symbol, while 88% consider it a sign of trust and integrity.</p>	<p>The status of the term “pharmacy” as a protected title in Great Britain may act in a similar manner to a Kitemark, resulting in higher consumer confidence than would otherwise be the case. In addition, use of the GPhC’s logo via a voluntary internet logo scheme may provide a similar benefit to registered online pharmacies.</p>
<p><b>Regulation, inspection and accreditation can make a contribution to the wider economy:</b></p> <p>The National Association of Testing Authorities (2017) lists the importance of accreditation at a company, industry and economy level. The study estimates the value of NATA’s contribution to the Australian economy, identifying activities such as setting standards and improving quality as key contributors to its overall economic impact.</p>	<p>This study is consistent with the above analysis in suggesting that the GPhC’s role in setting standards and safeguarding quality may have a positive impact on the economic contribution of the pharmacy sector.</p>
<p><b>Accredited services can attract higher prices:</b></p> <p>According to Frenz M. and Ray L. (2013) – based on a survey conducted to assess the impact of accreditation and infrastructure quality completed by 176 businesses – most respondents replied that prices for accredited services were higher than that for non-accredited services, on average by an estimated 8%. 50% of respondents considered that accreditation was a marketing and reputational advantage, while a further 16% felt that it was a requirement of their customers and nearly 20% reported benefits in efficiency and service quality from the assessment process.</p>	<p>It is possible that regulation by the GPhC and the associated consumer confidence in the quality of service received from pharmacies as outlined above result in the ability to command higher sales volumes and prices by pharmacies. For example, this may contribute to revenues from non-medical fast-moving consumer goods sold by pharmacies.</p>
<p><b>Encouraging training can improve industry wide productivity and governance:</b></p> <p>Cebr (2015) states that standardisation helps businesses to attain productivity.</p> <p>The Chartered Institute of Building, (2015) suggests that professional bodies improve productivity and governance of industry through research and training.</p> <p>The European Commission, (2011) seeks to assess the impact of adoption of EU conformity assessment standards by the security industry on producers and consumers. For producers, these standards were found to reduce costs related to multiple testing, reduce the time taken by the product to reach the market, enhance performance of the products, reduce client trials and increase innovation. Consumers were found to benefit from lower prices passed on by producers with lower compliance costs, availability of innovative solutions and enhanced information and transparency.</p> <p>The Department of Business, Energy and Industrial Strategy (2017) states that “organisations can save time and money by selecting accredited and therefore competent conformity assessment services.”</p>	<p>These studies suggest that pharmacies may be more productive and better governed as a result of the GPhC providing a common framework of principles and standards; e.g. through encouraging training through qualification requirements.</p>
<p><b>Regulation can encourage competition:</b></p> <p>The Department of Business Innovation and Skills (2011) stresses that regulation promotes competition ultimately benefitting the consumers.</p>	<p>As outlined above, the term “pharmacy” in Great Britain is a protected title, and this may in itself mean pharmacies have a shared brand of sorts. This may make it easier for independent pharmacies and small/medium sized chains to compete with larger players which are able to establish recognisable brands.</p>
<p><b>Regulation can be effective in safeguarding safety and wellbeing:</b></p> <p>Kankaanpa E., Aaltonen E. and Tulder M.V. (2014) suggests that regulations and inspection can reduce occupational accidents.</p>	<p>The GPhC conducts routine, intelligence led and themed inspections. As stated above, the GPhC documents a number of principles and standards which it states are “the backbone of our regulatory approach”. Public and patient safety and wellbeing is a stated aim for each principle, and the standards are such that they are also likely to have a positive impact on the safety of staff.</p>

## Appendix A Detailed Financial Information for MPCs, SIPs and ISIPs

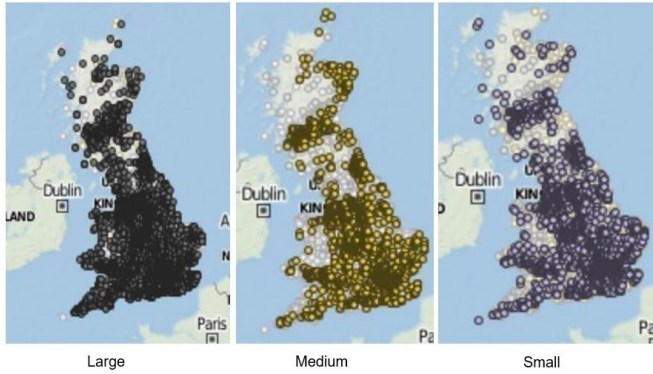
Pharmacy pseudonym	Number of premises	Stratum	Net surplus/deficit (£'000)			Cash (£'000)			Fee paid (£'000)	Fee as a % of cash
			2018	2017	2018	2017	2016	2018	2018	
M1	6	MPCs	(457.41)	(764.08)	422.72	140.30	0.10	1.57	0.37%	
M2	2	MPCs	40.93	(341.98)	202.26	208.55	467.58	0.52	0.26%	
M3	2	MPCs	31.49	35.48	14.82	13.34	76.26	0.52	3.53%	
M4	2	MPCs	(67.89)	63.20	3.93	158.01	189.89	0.52	13.32%	
M6	6	MPCs	803.37	(1,219.30)	522.04	467.10	636.45	1.57	0.30%	
S1	1	SIPs	(96.13)	(210.33)	4.70	0.00	0	0.26	5.57%	
S2	1	SIPs	21.81	6.61	91.82	91.34	66.63	0.26	0.29%	
S3	1	SIPs	49.39	(126.77)	5.75	5.69	56.43	0.26	4.55%	
S4	1	SIPs	8.56	5.42	101.64	92.12	54.59	0.26	0.26%	
S5	1	SIPs	25.80	27.66	19.30	62.34	4.05	0.26	1.36%	
S6	1	SIPs	(64.37)	10.23	73.41	87.23	22.07	0.26	0.36%	
S7	1	SIPs	49.05	78.96	644.50	543.26	450.34	0.26	0.04%	
S8	1	SIPs	117.63	56.41	1,578.68	1,537.82	1,464.09	0.26	0.02%	
S9	1	SIPs	79.93	134.86	113.16	113.60	639.22	0.26	0.23%	
S10	1	SIPs	(19.02)	137.10	194.08	214.92	165.60	0.26	0.13%	
SI1	1	ISIPs	(47.11)	(35.63)	67.12	49.78	25.75	0.26	0.39%	
SI2	1	ISIPs	(47.71)	(57.67)	0.10	2.02	95.67	0.26	262%	
SI3	1	ISIPs	15.07	8.61	13.56	6.80	15.80	0.26	1.93%	
SI4	1	ISIPs	(3.15)	(23.49)	49.29	2.52	10.85	0.26	0.53%	
SI5	1	ISIPs	50.59	55.62	367.56	391.17	300.97	0.26	0.07%	
SI6	1	ISIPs	(4.40)	(11.84)	28.93	0.52	0.69	0.26	0.91%	
SI7	1	ISIPs	(97.41)	41.80	138.41	287.18	103.53	0.26	0.19%	
SI8	1	ISIPs	10.06	(9.98)	29.44	19.15	38.16	0.26	0.89%	
SI9	1	ISIPs	(52.00)	(10.89)	11.02	10.20	18.23	0.26	2.38%	
SI10	1	ISIPs	(2.04)	14.29	522.37	429.39	319.31	0.26	0.05%	

## Appendix B Surplus/Deficit Size vs Fee – All Sampled Organisations

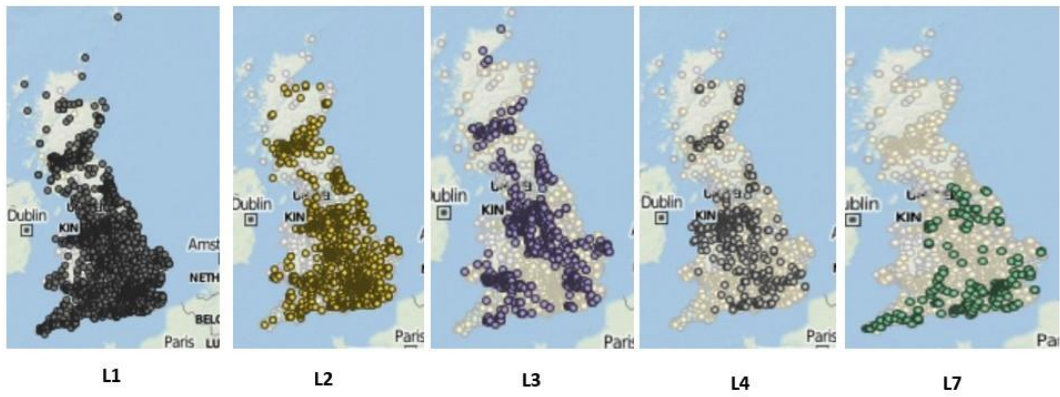
Pharmacy pseudonym	Pharmacy stratum	Number of premises	Surplus/ (deficit) 2018 (or most recent year) £'000	Absolute surplus/deficit (£'000)	Fees paid (2018) £'000	Fees as % of absolute surplus/ deficit
L1	LPCs	2,344	317,000.00	317,000.00	614.12	0.19%
L2	LPCs	1,578	(152,504.00)	152,504.00	413.43	0.27%
L3	LPCs	762	5,897.00	5,897.00	199.64	3.39%
L4	LPCs	517	(10,664.00)	10,664.00	135.45	1.27%
L7	LPCs	223	7,893.00	7,893.00	58.42	0.74%
M1	MPCs	6	(457.41)	457.41	1.57	0.34%
M2	MPCs	2	40.93	40.93	0.52	1.28%
M3	MPCs	2	31.49	31.49	0.52	1.66%
M4	MPCs	2	(67.89)	67.89	0.52	0.77%
M5	MPCs	6	803.37	803.37	1.57	0.20%
S1	SIPs	1	(96.13)	96.13	0.26	0.27%
S2	SIPs	1	21.81	21.81	0.26	1.20%
S3	SIPs	1	49.39	49.39	0.26	0.53%
S4	SIPs	1	8.56	8.56	0.26	3.06%
S5	SIPs	1	25.80	25.80	0.26	1.02%
S6	SIPs	1	(64.37)	64.37	0.26	0.41%
S7	SIPs	1	49.05	49.05	0.26	0.53%
S8	SIPs	1	117.63	117.63	0.26	0.22%
S9	SIPs	1	79.93	79.93	0.26	0.33%
S10	SIPs	1	(19.02)	19.02	0.26	1.38%
SI1	ISIPs	1	(47.11)	47.11	0.26	0.56%
SI2	ISIPs	1	(47.71)	47.71	0.26	0.55%
SI3	ISIPs	1	15.07	15.07	0.26	1.74%
SI4	ISIPs	1	(3.15)	3.15	0.26	8.31%
SI5	ISIPs	1	50.59	50.59	0.26	0.52%
SI6	ISIPs	1	(4.40)	4.40	0.26	5.95%
SI7	ISIPs	1	(97.41)	97.41	0.26	0.27%
SI8	ISIPs	1	10.06	10.06	0.26	2.60%
SI9	ISIPs	1	(52.00)	52.00	0.26	0.50%
SI10	ISIPs	1	(2.04)	2.04	0.26	12.82%
ON1	OLPs		(12,133.00)	12,133.00	0.26	0.00%
ON2	OLPs		(150.35)	150.35	0.26	0.17%
ON3	OLPs		(0.23)	0.23	0.26	111.02%

## Appendix C Geo-mapping of Sampled Pharmacies

Distribution of all premises by state



Distribution of premises for the five Large chains sampled



Geographical distribution of premises for Medium chains sampled



Geographical distribution of premises for Small and Small Isolated chains



## Appendix D Literature Review Bibliography

- ▶ Swann P. (*The Economics of Standardization: An Update, Business, Innovation and Skills (BIS)*, 2010) – [Link](#)
- ▶ Frenz M. and Ray L. (*The Economics of Accreditation, BIS/UKAS*, 2013) – [Link](#)
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- ▶ Cebr (*The Economic Contribution of Standards to the UK Economy*,2015) – [Link](#)
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- ▶ Akerlof G. (The Market for "Lemons": Quality Uncertainty and the Market Mechanism) – [Link](#)

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Ernst & Young LLP, 1 More London Place, London, SE1 2AF.

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