

The CMA has made an egregious oversight in the structuring and execution of its enquiry. Which is comparing the Apple and Google ecosystems and related market power strictly on operational and technical considerations, without addressing the vastly different business models underpinning the browsers, operating systems, and companies themselves.

In considering a singular mobile “ecosystem”, the CMA risks thinking it is comparing apples and apples, when it is really comparing apples and oranges. There are two relevant mobile ecosystems – iOS and Android – however in addition to those being two product ecosystems, they are as importantly two different business model ecosystems.

The Apple ecosystem is a ‘first-party payer’ ecosystem. iOS users are Apple customers and pay for the development and maintenance of iOS through the first-party purchases of Apple hardware devices. Most of Apple’s revenue comes from Apple hardware and device sales.

The Google ecosystem is a ‘third-party payer’ ecosystem. Android users are not Google customers, as a vast majority of Android users (and non-business Google users in general) do not pay for the development and maintenance of Android through first-party from Google. Rather, most of Google’s revenue comes from third-party customers, advertisers, who buy the attention, data, and time of Google users.

As an example of how Google partitions its ‘free’ and ‘paid’ services, all ‘free’ Gmail and Google Search users have their activity and content recorded, indexed, and tracked by Google to create and refine the targeting of advertising content and services. ‘Paid’ Google users (like those using Google Cloud apps) use the same services – Gmail and Search – only their content is not recorded, indexed, and tracked by Google in the same way.

Reason being that if I am a ‘free’ Gmail user, the cost of my activity and usage is paid for by advertisers. I contribute attention, data, and time to facilitate the advertising business, and in return, the advertisers subsidise my use of the services. If I am a ‘paid’ Gmail user, I am paying for the cost of my activity and usage. As many of these accounts are business-related, I will be dealing with commercial and/or confidential data, therefore I pay for my privacy when using the services.

Therefore, as an Apple customer, when I buy an iOS device, I directly contribute to the R&D costs of developing iOS. In essence, I am both a user and a customer of Apple. When I use Apple services like Mail, Maps, or Weather, I as an Apple hardware and services customer pay for the development and operation of those services. I effectively pre-pay for those services when purchasing Apple hardware. Once I have purchased an iPhone, I have basic access to the full suite of Apple applications as a first-party customer.

As a Google users, when I buy an Android device, I buy it from a third-party manufacturer, who in turn licenses Android from Google. I am a user of Google services, but not a first-party customer. Upon purchase, I myself have not paid Google directly for any services yet. When I use Google services like Mail, Maps, or Weather, I as a Google user do not pay for the development and operation of those services. The development and operational costs for those services are paid for by third-party advertisers.

Before we can begin investigating the fairness of the ecosystem(s), we first must look at the nature of the relationship between customers, users, and suppliers. And then apply rules based on the specifics of those relationships, rather than treating each platform as a comparable ecosystem. For ultimately, they are very different.

By way of analogy, there is already (ample) precedent for this with regards to other types of IP and content in the form of different regulations between advertising-supported media like radio and television, versus subscriber-supported media like Amazon Prime and Netflix.

Advertising-supported and subscriber-supported IP and content streams are treated (substantially) differently already, and therefore CMA investigations into mobile operating systems, browsers, gaming, and beyond should be treated through the same lens. The standards and regulation are different depending on the relationship between the suppliers and the consumers. Bi-lateral consumption relationships (subscriber-supported) are treated very differently than multi-party consumption relationships (advertising-supported).

And this investigation should be no different. While Apple and Google devices both run applications like Flightradar24, Tinder, Twitter, the relationship between Apple users and Google users is very different. As is the relationship of Channel 5 viewers, and Netflix customers. Channel 5 and Netflix each compete for the same supply of audience time and attention.

Channel 5 viewers are not Channel 5 customers. Channel 5 advertisers are Channel 5 customers. Therefore, there is a multi-party relationship. Netflix viewers are also Netflix customers. And everything from customer expectations to regulatory regimes are defined by that commercial relationship between content producer and consumer.

As an Apple customer, I pay Apple to develop and maintain iOS. As a Google user, a third-party pays Google to develop and maintain Android. Apple architects the iOS user experience for its customers – Apple users. Google architects the Android user experience for two parties – its users and its customers.

Therefore, I agree with Apple that the CMA investigation is inherently ill-founded. As an Apple customer and user, I directly pay Apple to develop and implement technologies. If I were to be unhappy with Apple's choices, I have the simple option of no longer buying from Apple. I do not require (nor desire) the interference of the CMA in my bilateral relationship with Apple.

As an Android user, I am not directly paying Google to develop and implement technologies. I am a user subsidised by Google's true customers – advertisers. As this is a multi-party relationship, perhaps it is advantageous to have the CMA intervene to ensure the correct balance of power between Google customers and users.

In the Apple ecosystem, Apple (globally) derived its revenue from the following sources:

Total revenue: \$365B

Product sales:
iPhone: \$192B
Mac: \$35B
iPad: \$32B
Wearables: \$38B

Services: \$68B

Advertising: \$4-5B (est)
(Omedia et al)

App Store:

Apple paid a total to developers of \$60B in 2021. The company charges a commission between 15% and 30% on App Store payments to developers.

While Apple does not disaggregate services revenue:

At 100% of sales occurring at the 15% level, we can estimate that the total volume of payments through Apple App Stores was circa \$70B, with Apple taking circa \$10B as commission.

At 100% of sales occurring at the 30% level, we can estimate that the total volume of payments through the Apple App Stores was circa \$86B, with Apple taking circa \$25B as commission.

Thus, we have a range for Apple's App Store income, between \$10B and \$25B, with a median of \$18B between those two estimates.

If we then look at Apple's revenue in proportions:

Total: \$365B

Hardware: 81%
Non-hardware: 19%

Services account for 18.6% of the total and majority of Apple's non-hardware revenue.

As a proportion of total revenue
App Store revenue (high): 6.8%
App Store revenue (low): 2.7%

App Store revenue (median): 5%

Those are all first-party revenues. That is revenue from customers to Apple, for a variety of hardware and services.

Apple’s advertising revenue represents third-party revenues. That is revenues from third-parties, to Apple:

Advertising revenue (est): 1.4%

If we look at Google’s revenues using a similar analysis:

Total revenue: \$258B

Ad revenue:

Google Search: \$149B

YouTube: \$29B

Google Network: \$32B

Google advertising: \$210B

Google other: \$28B

Google Services: \$238B

Google other: \$20B

Meaning advertising supplies 81% of Google’s revenue. Advertising in the form of third-party payments, which is that the pro

Google’s Play Store generated an estimated \$48B in sales. Using the same calculation as Apple, we end up with a revenue contribution at Google of the following:

High (30%): \$21B (8% of global total)

Low (15%): \$8B (3% ..)

Median: \$14B (6% ..)

By way of comparison between Apple and Google:

	Apple	Google
Revenue	\$365B	\$258B
Hardware	81%	*
Software		
Services		
Advertising	2%	81%
App Store	5%	6%

Or presented differently:

	Apple	Google
First-party revenue	\$365B	\$258B
Hardware	81%	*
Software	*	*
Services	*	18%
Third-party revenue		
Advertising	2%	81%
App Store Commissions	5%	6%

	Apple	Google
First-party revenue	93%	18%
Third-party revenue	7%	92%

Thus, we have two radically different business model environments. One supported by first-party purchases (Apple) and one supported by third-party purchases (Google).

	Apple	Google
OS company	Apple	Google
Hardware manufacturers	1 (Apple)	20*

* Over 0.5% marketshare according to AppBrain

Therefore, we can regard Apple's iOS and Apple's iPhone as inseparable halves of the same whole. And Google's Android as a modular component offered mostly free to hardware manufacturers worldwide.

On a simple basis, we can further distil that into the following sensibility:

- Apple's R&D costs are largely paid for by first-party consumers (product users)
- Androids R&D costs are largely paid for by third-party consumers (advertisers)

Therefore, on a business-model and conceptual basis, we have two functional ecosystems. One paid for by its users (Apple) and another paid for by advertisers (Google).

Based on the above reasoning, the CMA should rearchitect its view of the market to consider the relationship between users and suppliers as platforms where there is a direct relationship between supplier and customer (Apple) and platforms where there are indirect relationships between supplier, customers, and users (Google).

The CMA analysis is at some points self-contradictory. On one hand, the CMA notes that Apple's required use of WebKit inhibits customer experience and limits competitiveness. On the other hand, the CMA also notes that Google already has opened its platform to alternative browsers, yet consumers (vastly) use the native Blink browser.

That 97% of browsing in the UK is done via WebKit (mandated) and Blink (not mandated) illustrates that there is little demand from either consumers or developers for alternative browser technologies.

If the CMA analysis was correct that Apple's mandated use of WebKit was having an inhibitory effect on either customer experience or developer capabilities, we would likely see greater differentiation on the Android platform. That Blink remains dominant there, even though the ecosystem is more open, says that each browser technology is fit for purpose and there is little to be gained by forcing greater openness for WebKit.

Further, if the CMA mandates Apple open iOS to competitive browser technologies, there is the substantial risk that the CMA forces this market from a duopoly into a monopoly. For, if the CMA mandates that Apple allow competitive browser technologies, and we see in the Android example that consumers and developers do not demand a rich ecosystem of browser technologies, the likely result is that Blink may come to dominate the iOS platform as well as the Android platform.

Reason being that if the CMA mandates Apple opens iOS to alternative browsers, the next likely browser for adoption by iOS users is likely to be Blink. A significant proportion of that use will be via the Chrome browser itself. However, an additional significant proportion will be in the browsers built into third-party applications.

Currently, developers write for two ecosystems. Apple/iOS/WebKit and Google/Android/Blink. If writing for Apple/iOS/Blink becomes an option, developers may well adopt that, for it simplifies development. Developing for one browser technology on two platforms, rather than two browser technologies on two platforms.

If that were to be the outcome, there will be a couple of adverse effects on consumers:

Rather than increase the diversity of browser technologies in the ecosystem, it more than likely will enhance the dominance of Blink. Both via Google's own Chrome, as well as third-party apps which develop solely for Blink, rather than for Blink and WebKit.

This may be particularly insidious to both Apple customers and the market in general. If most users today do not necessarily know that Google Chrome on iOS uses (by mandate) WebKit, it stands to reason that they also will not know if Blink replaces WebKit in third-party applications. For example, if Twitter were to adopt Blink as an internal browser over WebKit, would an end user know? Would it matter to them?

We might say that if it the mandated use of WebKit today doesn't matter to them, then third-party use of Blink tomorrow also wouldn't. However, that would be remiss of what the change both represents and means in practice.

By forcing Apple to allow adoption of third-party browsers, and Blink being the most likely third-party browser to be adopted, Apple users who buy either specifically or tacitly into the security of Apple's 'walled garden' ecosystem may end up being forced to use Blink by third-party developers. If Twitter adopts Blink, then Twitter users effectively become Google users. As it's not necessarily clear to the user that WebKit is the browser of choice today, it would probably remain opaque if Blink became the browser tomorrow.

Why does this matter? As Apple mentions in its own response, WebKit is a central piece of the iOS software and user experience, and Apple maintains and updates it with the rest of iOS. Therefore, today, WebKit and all first and third-party uses of WebKit adhere to not only Apple standards but also Apple values and brand promises. Like a commitment privacy, for example. If I use the browser on Twitter today, that is an Apple browser.

If the CMA forces Apple to open iOS and the browser technology to third parties, and Blink is the most likely third party adopted, Twitter can easily shift its own internal browser to Blink. If it does that, there is now an unlabelled piece of Google technology operating on my iPhone.

As Google's ultimate customers are advertisers and the company's business model is selling user data and attention to advertisers, presumably that extends to the use of the Blink browser being embedded in third party applications like Twitter. Therefore, today as an Apple user, when I use Twitter, I am using the Apple browser which I pay for as an Apple customer. Tomorrow, if the CMA were to follow through with its actions and the market on both platforms concentrates around Blink, when I use Twitter I very well may be using Blink. Depending on the terms and conditions of use, that usage of Blink from within Twitter may well feed my data back to Google to be processed and sold to Google's advertising customers.

Google's emphasis on transparency and platform openness strikes as double-edged sword. On one hand, the internet was built on open platforms and with open protocols. On the other hand, Google asserts massive dominance in several areas. That they have a monopoly with the potential for abuse and favour open standards show these ideologies do coexist.

Therefore, it is not a surprise that they favour browser openness and transparency. Because the Android platform already supports those features, and the data shows that regardless of that openness, Blink remains the dominant browser. Thus, forcing Apple to open iOS under the remit of enhancing competition may do the exact opposite and only expand the footprint of Blink onto iOS.

In that case, Apple users who in part or in whole buy into Apple's secure walled garden will not receive the benefit of a rich browser ecosystem. For we already see with Google that there is no rich browser ecosystem to be had. Rather, what we will see is the encroachment of Google and Blink into the iOS walled garden, the potential adoption of Blink by third-

party developers, and therefore iOS users now feeding data into the Google ecosystem which is paid for by, and operated for, its advertising customers and not (only) its end users.

One could make the case that Apple should allow alternative browsers like Chrome on iOS to use its own internal Blink engine. So that if I am using Chrome, I am using Blink. However, the CMA is not looking at mandating that Apple allow browsers competitive to Safari (like Chrome) to use their own engines. Rather, the CMA is looking at Apple allowing alternatives to WebKit, which is not the browser, but the underlying technology.

If this were really an issue about user experience, then would we not see Google lobbying for the ability of Chrome to include Blink, rather than iOS to be open to technologies other than WebKit? It would be hard to be against the mandate for Google to be allowed to bundle Blink into Chrome as that is the browser application. Forcing Apple to allow competition to WebKit crosses over from browser applications into the operating system layer itself.

As an Apple user, I pay – in part – for Apple’s UX, UI, and walled garden experience. Far from a detriment, Apple mandating the use of WebKit across the platform is something that (so far) has been beneficial and something that I as a customer pay Apple for. To be very clear, if the CMA forces Apple to allow competition to WebKit, especially by Google, that is effectively allowing Google advertisers to co-opt the technology platform that I paid for as an Apple customer. For, as an Apple customer, I pay for the development and maintenance of Apple hardware and software.

Third-party advertisers pay for the development and maintenance of the Android platform. If the CMA mandates that Apple open iOS to third-party browser technologies (like and including Blink), effectively the CMA is mandating Apple to allow third-party advertiser-supported technology products on the iOS platform. If a third-party developer adopts Blink without my knowledge and that embedded installation of Blink sends data back to Google, fundamentally I am paying twice. Once for the development of the iOS platform, and again with my data and attention, which Google sells to its advertising audience.

Therefore, where an Android user only pays once – and a predominately non-financial cost – I as an iOS user would be paying twice. First as an Apple customer where the purchase price of my device and its related services pay for the development of the software. Secondly with my data and attention as a (potentially unwitting) Google customer, via a third-party developer’s choice of Blink to make their own development process more efficient.

It is obvious why Google supports this initiative. It provides them a toehold into iOS user data currently denied to them by Apple’s business model and architectural decisions. It is for the very same reason that I feel, like Apple, the CMA’s investigation is ill-founded. It may be reasonable to allow for third-party browsers like Chrome to use alternative browsing technologies. Therefore, it may be reasonable that Apple should allow alternatives to WebKit in other browsers. For, as a user, if I am choosing Chrome, I am choosing to use Google software.

However if that were to be the outcome of this work, it should also be within Apple's remit that any case where the user does not specifically select a branded browsing function (like tapping the Google Chrome icon itself), that all operating system driven browsing remains mandated through WebKit. For the simple reason that without that mandate, it would be very easy for third-party developers to use browser technologies that sell user data as a primary business model without user knowledge.

If I tap the Chrome icon, I am going into Google's domain and exchanging my data and attention for the use of (many of) their products. What I feel the CMA must avoid is a user like myself unwittingly entering the Google ecosystem via a third-party app offering in-app browsing via Google without my consent / intention as a user.

Regarding the concerns of developers within the ecosystem, it is important to understand that developers are not specifically customers of the Apple or Google ecosystems, but suppliers to those ecosystems. While the concerns of developers should be considered, they should be considered as suppliers, and not on the same basis or with the same weight as paying customers.

While there looks to be ample support from developers having the CMA intervene in the ecosystem, my own view is that they are suppliers to the ecosystem and must be bound by the terms of their demand channels. And the demands of each channel – Apple and Google – are different, simply because the business models and the customer bases are different.

Saying that Apple's walled garden policies restrict innovation is likely correct, however it is unlikely that the Apple user considers this to be a substantial harm, and more likely a benefit or core product feature.

What is missing for me in much of the analysis here is that every architectural decision involves trade-offs. Forcing browser openness, for example, comes with implications for issues of compatibility, privacy, security, and others. While Google may advertise itself as more open and compatible, the Oxford researchers for example point out that Google is generally less secure. Therefore, we must not simply consider openness alone, but rather openness in context of its trade-offs – like security.

Overall, perhaps unsurprisingly, I support Apple's stance that much of this investigation and likely subsequent investigations are ill-founded. Predominately because of the false equivalent set up between the Google Android and Apple iOS ecosystems. While they may look and feel similar, and accomplish many of the same outcomes, they are distinctly different when it comes to who actually pays the bill.

There are some very specific reasons I do not use the Android operating system. First and foremost, I do not find it (nearly) as well-designed, architected, and integrated as iOS. That is a matter of personal preference. Secondly, because I value privacy and security more than I value innovation and openness in this domain. I like Apple's walled garden. I like the fact that every application and developed is forced to use WebKit, and therefore Apple can manage security threats. Perhaps a counter to that argument is that I'm solely relying on

Apple to manage those security threats. If I had the choice between relying solely on Apple to manage security for my device or having the option of relying on multiple vendors to manage it, my choice would be the former.

In fact, my choice already is and has been the former.

In conclusion, as the CMA moves forward with this inquiry and potential policy and regulation, it would be best to differentiate between the two ecosystems and put policies in place that work within each.

Attempting to regulate iOS, where I am the customer primarily paying for the development of the software, ecosystem, and infrastructure, in a similar fashion to Android, where I am simply a user and the customers are advertisers is indeed ill-founded.

It would be great to see a set of guidelines for mobile ecosystems where the buyers are first-parties, versus mobile ecosystems where the buyers are third-party. That would best suit both iOS and Android users, and allow the ecosystem to better flourish.