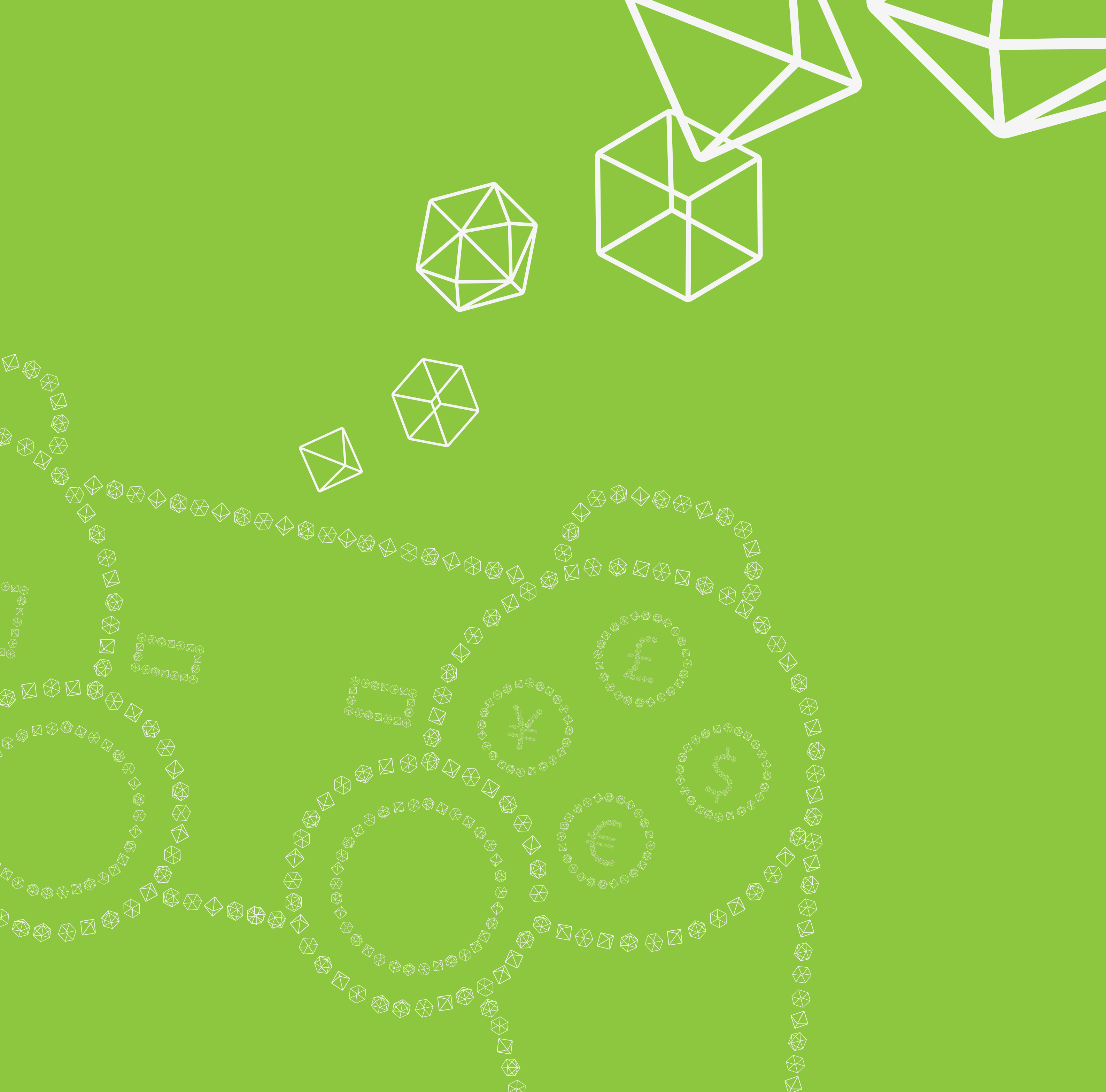
Policy briefing: February 2010

NESTA Making Innovation Flourish

The Money Game

Project finance and video games development in the UK



Executive summary

Seemingly everyone agrees on the importance of the video games sector to the UK economy. Yet the fiscal environment may prevent policymakers giving the sector what it most wants – a tax credit that helps to level the international playing field. Policies to improve the quality of university video games courses are crucial, but they will not stave off the industry's near-term decline in global development rankings. Fresh thinking is urgently needed on what government can do. This briefing – the first in a series on this topic from NESTA – looks at one such idea, encouraging external project finance.

Video games studios in the UK rely on global publishers for the financing of their development activities. Although this has helped to channel funds into the video games sector, it has also made it difficult for UK studios with high growth potential to scale their businesses – under this model, publishers retain ownership over the Intellectual Property (IP) that is generated, a crucial source of long-term value in the sector. And there is recent evidence showing that publishers are commissioning less original IP. This puts UK studios in a tight spot – they can't compete on costs, particularly against territories overseas where development is publicly subsidised, and leveraging their creative talent and ingenuity seems to be getting harder, at least with publisher-backing.

Excessive reliance on publisher funding might also be hindering UK studios' transition to booming online and mobile gaming markets. This is because business models in these new markets are less suited to traditional models of publisher finance. There is evidence that UK studios are already lagging behind in these markets.

New financing instruments are needed if UK studios are to remain innovative in established markets, and take advantage of the opportunities presented by new ones. More mature creative sectors like film and television offer production companies a wider range of financing options, including project – as well as corporate – finance drawing on external investors.

External project finance models can make the video games sector more attractive to investors because they allow them to manage their risks in a more controlled manner than if they had to take an equity stake in a whole business. Studios, in turn, are able to retain more of their original IP, and generate additional revenues that can be invested in growth and innovation. Finally, publishers are also able to share with other investors the risks of financing more innovative and original projects in the UK. It is estimated that over £23 million has been invested in the UK games sector in the last five years using external project finance instruments.

But this is a tiny fraction of overall investment in UK video games development – there are significant barriers to the wider uptake of external project finance. Awareness of project finance models, particularly among studios, is low. External project finance can be complicated, and the fixed legal and administration costs are currently too high for many studios. The main tax schemes to encourage investment in the UK – the Enterprise Investment Scheme and Venture Capital Trusts – are not as well suited to project as they are corporate finance. Policy has an important role to play in lowering these barriers. The television and film industries also receive some public project finance in the form of broadcaster and Lottery money. It is time that some of this was redeployed towards video games development.

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1. A creative success story for the UK faces its greatest challenge

In recent months the UK video games sector has become the focus of a great deal of attention from policymakers across the political spectrum. Seemingly a consensus has been reached on its economic (and cultural) significance. Last June an All Party Parliamentary Group for the sector was established with over 20 MPs and Lords. It is now widely accepted that, just when video games have become a mass entertainment medium,[1] the UK video games sector faces a serious risk of losing its position at the forefront of global development.[2]

Yet, the dire straits of the public finances means that no party has yet been able to commit to what many in the sector have called for: a tax credit to level the playing field with competitors such as Canada, France and Singapore, where the industry receives significant public subsidies.[3] Policies to further improve the quality of graduates coming out from video games courses are crucial, but they will not deliver the immediate benefits which will stave off the industry's decline in global rankings.

Fresh thinking is urgently needed on how the government can support the sector. This report, on external project finance for video games development, marks the first in a series of pieces NESTA plans to publish in coming months to address this issue.

Staying ahead as new markets emerge
Ultimately, creativity and innovation will determine the sustainability and growth of the UK video games sector – they are what made it a global leader in the first place.

UK development studios have a worldwide reputation for their ingenuity, talent and technical prowess – indeed they have been behind some of the sector's most innovative and commercially successful Intellectual Properties (IPs) – Grand Theft Auto, Tomb Raider and Fable are but three classic examples. Their renowned capacity to innovate should leave studios well-placed to reap the commercial opportunities of new and fast-growing gaming markets.

Like other creative industries, video games are undergoing a revolution as more and more people use online platforms to access content, and come together on the Internet to enjoy social and multi-player gaming experiences. Video games companies have been ahead of the curve in reaching and monetising these online audiences through innovative business models such as micro-transactions, virtual markets and 'freemium' strategies. Britons spent £280 million on casual video games in 2009.[4] Steam, a digital platform for the distribution of PC video games, reached 25 million global users,[5] while Xbox Live Arcade, Microsoft's dedicated online platform for its Xbox360 console, generated $100 million in worldwide revenues that same year.[6]

The mass adoption throughout the world of smartphones with enhanced processing and graphics capabilities, and easy access to online marketplaces for the purchase of 'apps' has also created enormous audiences for mobile games. 173.8 million smartphones were shipped in 2009,[7] and almost a third of their users report playing video game applications daily on these devices. This represents a market of almost 60 million new users last year, larger than the installed base for any of the major consoles.[8] New business models are

Why Games are the 21st Century's Most Serious Business.' London: Virgin Books.

2. The global market for video games, which was worth £30.9 billion in 2008, is expected to grow at an annual rate of 10.3 per cent over the next four years – almost twice as fast as filmed entertainment (see PwC (2008) 'Global Media and Entertainment Outlook 2008-2012.' London: PricewaterhouseCoopers). In the UK, there is a video game console in half of all households. Video games revenues surpassed the revenues for film (including box office and DVD sales) in 2009 (see Wallop, H. (2009) 'Video games bigger than film.' Daily Telegraph, 26 December). The UK was, in 2008, the third largest development territory in the world after the USA and Japan, with global revenues worth £2.03 billion, and 10,000 people directly employed by video games studios (see Games Investor Consulting (2008) 'Raise the Game.' London: NESTA).
3. NESTA (2009) 'Time to Play.' London: NESTA.
4. Crossley, R. (2010) UK spent £280m on casual games in 2009. 'Casual Gaming Biz.' 11 February. Available from: http://www.casualgaming.biz/news/29813/UK-spent-280m-on-casual-games-in-2009 [Accessed 11 February 2010].
5. Graft, K. (2010) Valve: Steam Broke 25 Million Active Users In 2009. 'Gamasutra.' 29 January. Available from: http://www.gamasutra.com/view/news/27011/Valve_Steam_Broke_25_Million_Active_Users_In_2009.php [Accessed 9 February 2010].
6. Ogden, G. (2010) Xbox Live Arcade Revenue Hit $100 Million in 2009. 'Edge Online.' 6 February. Available from: http://www.edge-online.com/news/xbox-live-arcade-revenue-hit-100-million-2009 [Accessed 9 February 2009].
7. The New Statesman (2010) Global smartphone shipments surge 30 per cent in Q4, says Strategy Analytics. 'The New Statesman.' 2 February. Available from: http://www.newstatesman.com/technology/2010/02/market-share-smartphone [Accessed 9 February 2010].
8. Perez, S. (2009) 'The State of the Smartphone: iPhone is Way, Way Ahead.' Available from: http://www.readwriteweb.com/archives/the_state_of_the_smartphone_iphone_is_way_way_ahea.php [Accessed 9 February 2010].

also emerging in this area: for example, it is estimated that the market for virtual currencies and goods in mobile applications – including mobile video games – will reach a staggering £9 billion in 2014.[9]

The purpose of this report: finance, innovation and growth in the UK video games sector

But in order to remain strong and innovative, particularly as the competitive environment shifts with the arrival of new gaming markets, UK studios need access to the right kind of finance. This briefing sets out to explore the landscape for the financing of video games projects in the UK, and identifies structural weaknesses that are hindering the sector's ability to innovate and grow.

Part 2 shows how, like other creative industries where commercial success is dependent on highly unpredictable consumer demand, the video games sector has developed models for the financing of their activities where it is projects rather than businesses that are funded. It goes on to explore the dominant model for the financing of video games projects, where publishers provide funds to studios, and identifies its advantages and drawbacks for the UK video games sector. Part 3 describes alternative project finance models for the funding of video games development with the participation of external investors. It identifies ways in which they can strengthen the UK video games sector, and highlights some barriers to their wider adoption. Part 4 concludes by considering policy implications.

2. Established models for the finance of video games development in the UK, and their implications

When self-funding is not enough

In the early days of the video games sector, budgets were small and studios comprising a handful of talented individuals were able to use their own resources to fund their development activities. They retained control of the creative process and the original IP that was generated, which they licensed to publishers for distribution.

Development budgets have escalated significantly since then, as hardware has become more powerful and consumers more demanding. This has made it hard for studios to self-fund video games development, especially when targeting higher range platforms such as video games consoles. Instead, they have had to draw on other sources of finance.

Access to corporate finance is difficult

In principle, these studios could resort to corporate finance, structured as debt – such as a bank loan or corporate bond – or equity, with an investor providing them with funds in exchange for a share of their overall profits.[10]

But like other creative industries, the video games sector presents certain features that make corporate investments an overly risky proposition for many financiers.[11] They include high levels of uncertainty about consumer demand, reliance on creative talent that is often not commercially motivated and the intangible IP-based nature of their output.[12] Although studios can, in principle, help mitigate the effect of these risks by adopting a portfolio strategy where they run several projects simultaneously, most of them lack the scale to do this.

Publishers as the financiers of video games development

For the reasons above it is video games development projects, rather than businesses, which tend to get funded. Rather than investing in unpredictable businesses lacking the scale to spread the risks of unforeseeable consumer demand, financiers undertake investments in specific projects, where the risk-return profile and exit strategy are more clearly defined and performance is easier to monitor. They then diversify risks through their own portfolios.

As has historically been the case for music and books, publishers within the industry, rather than external investors, have adopted this financing role. As a result, publishers, who have well-established relationships with distributors and retailers, also act as 'gatekeepers' who determine which creative products reach the market.[13] Because they manage portfolios of creative projects, publishers are also a more attractive investment proposition for external financiers seeking to diversify their risks. Indeed, most of the world's largest video games publishers are publicly traded companies.[14]

The dominant models for publisher finance

Publishers fund video games projects according to two main models. These are 'work-for-hire', where a publisher commissions a studio to develop a video game for a fee, and 'royalty advances'. In this second model, a studio pitches a project to a publisher, with whom it agrees to share the royalties generated by the

9. Holden, W. (2009) Freemium Model to Predominate in Mobile Apps with VAS revenues Reaching $14bn by 2014, says new Juniper report. 'Juniper Research.' May 13. Available from: http://juniperresearch.com/shop/viewpressrelease.php?id=179&pr=139 [Accessed 9 February 2010].
10. In practice, there is a wide spectrum of hybrid instruments between debt and equity finance, but both share a focus on the business as the recipient of the funds.
11. Caves, R. (2000) 'Creative Industries: Contracts Between Art and Commerce.' Cambridge, MA: Harvard University Press.
12. Differently from other risky and innovative sectors, the creative industries rely mostly on copyright, and not patents, to protect their intellectual property. Patents are a stronger form of protection than copyright, as the latter is easier to circumvent by imitators.
13. NESTA (2006) 'Creating Growth.' London: NESTA.
14. Codemasters is the only UK publisher of a global scale left after the acquisition of Eidos by Square Enix in 2009.

product in exchange for an advance that funds development activities.[15] Once the video game is released, the publisher recoups the advance from the sales receipts of the video game, after which point it begins to share royalties with the studio. (Table A1 on page 9 summarises the various financing models).

A recent survey of UK studios by The Independent Games Association (TIGA), the industry trade body, emphasises the sector's heavy reliance on publishers – both as customers and sources of finance.[16] Seventy-one per cent of independent studios report that publishers are their main customers – on average, 58 per cent of their sales go to a single publisher client. Fifty-nine per cent of studios report that they have performed development under work-for-hire agreements in the 12 months prior to the survey and 58 per cent of studios report that they have received royalty advances from publishers.

The advantages and downsides of publisher finance

These work-for-hire and royalty advance models have been used for a long time in the sector, and they are well understood by all participants. Publishers have established relationships with distributors and retailers, which enables them to reduce, to an extent, uncertainty about consumer demand. Publishers also provide studios with support services such as quality assurance, testing and localisation. From the studio perspective, signing a development agreement with a publisher (regardless of the model) provides a high degree of security that they will have the required finance to complete the project.[17]

However, work-for-hire and royalty-based finance models make it difficult for studios with growth potential to scale their businesses. In the case of work-for-hire, they do not receive any royalties even if the video game developed ends up being a 'runaway success'. In principle, the royalty advance model should allow both parties to benefit from commercially successful products. But, in practice, the terms of trade at which these deals are struck are not favourable to studios. Perhaps less than 5 per cent of studios earn additional royalties beyond the initial advance.[18]

It is not clear whether the dominance of publisher finance is good for innovation either. Since the publisher bears the financial risk of the project, there is an understandable attraction towards tried and tested video game concepts at the expense of developing original, more innovative projects.

There is evidence that this has become increasingly the case as development budgets have escalated.[19] Related to this, typically publishers require studios to relinquish ownership over any original IP they commission in exchange for funding. Even in cases where a studio is able to hold onto its IP, publishers will usually insist on privileged publishing rights for sequels and derivative products.[20] In some cases, publishers even insist on 'cross-collateralisation', where a studio's royalties for a successful video game may be withheld to recoup losses in earlier projects.

Publishers are commissioning less original IP development

Nearly three-quarters of studios responding to a NESTA survey carried out in 2009 reported that major console-based IP is in decline, and 78 per cent of developers expect this trend to continue in the future.[21] In fact, the situation risks becoming even worse for studios, as cash-strapped publishers narrow their product portfolios and focus their investments on their own in-house studios.[22]

As NESTA has previously argued, a big strength of the UK's video games sector is its innovative and nimble independent studios, who co-exist with larger organisations such as publisher-owned studios which have the scale to produce blockbusters targeting higher-end platforms.[23]

That publishers are commissioning less original IP from studios is detrimental insofar as it reduces the viability of the UK independent sector. Although it may seem that publisher-owned studios – which employ around one-half of the UK's development workforce – are immune from these challenges, they themselves compete for resources against 'sister' studios that are in many cases located in territories where the video games sector is publicly subsidised.

The conclusion is that UK video games studios – independents and publisher-owned alike – are increasingly caught between a rock and a hard place: competing with the likes of Canada, Singapore and China through lower costs is not an option, and being innovative, the alternative, is becoming more difficult without new sources of finance.

15. This advance, usually non-refundable, is calculated to cover the costs of producing the video game, and released in instalments against the achievement of specific milestones.
16. TIGA (2009) 'State of the UK Video Game Development Sector.' London: TIGA.
17. In practice, issues often do emerge during the development of a video game that significantly affect the profitability of the studio as the specification can rarely be truly exhaustive. Because the developer is reliant on the publisher for its finance, it is at a commercial disadvantage in any dispute.
18. Authors' guesstimate based on the number of video games that achieve sales above the point where the publisher recoups the initial investment.
19. Sinclair, B. (2010) Analysts blame 2009 slump on music games, lack of innovation. 'Gamespot.' 15 January. Available from: http://uk.gamespot.com/news/6246485.html [Accessed 15 February 2010]; also Tschang, F.T. (2007) Balancing the Tensions Between Rationalization and Creativity in the Video Games Industry. 'Organization Science.' Volume 18(6), pp.989-1005.
20. The proliferation of gaming platforms also means that the original IP generated during development can be exploited more widely – whenever they relinquish their IP in exchange for publisher funding, studios are in effect sacrificing potentially higher revenues in the future. For a legal perspective on this issue see http://archives.igda.org/articles/behr-wallace_contracts.php
21. NESTA (2009) 'Time to Play.' London: NESTA.
22. Crossley, R. (2010) Devs urge caution as publisher deals ebb. 'Develop Magazine.' 11 February. Available from: http://www.develop-online.net/news/33881/Devs-urge-caution-as-publisher-deals-ebb [Accessed 11 February 2010].
23. Games Investor Consulting (2008) 'Raise the Game.' London: NESTA.

The current funding landscape limits the transition to mobile and online markets

It is widely believed that booming mobile and online markets could be a new outlet for the creative potential of UK video games studios. Indeed, NESTA's 2009 survey of video games businesses highlighted online and mobile as the only video games market segments where original IP was expected to thrive in the future.[24]

However, online games, as well as mobile games distributed through Applications marketplaces such as Apple's App Store are far less suited to the finance models described above, where publishers fund video games development by independent studios. Online and mobile video games usually require substantial support and a sustained stream of content updates after release. This means that whenever publishers commission video games for these markets, they do so through their in-house studios.[25]

If the independent studios that are such an important component of the UK video games sector are to make the leap to these emerging markets, they somehow need to develop new technologies and capabilities without drawing on the publisher finance on which they have traditionally relied.

The UK is lagging behind these markets

There is strong evidence suggesting that the UK is already lagging behind competitors in South Korea, China, Finland, Sweden and Germany in its transition to burgeoning online and mobile markets.[26] A recent survey shows that only around one-third of UK developers are targeting those markets, even though they are widely expected to be the fastest-growing, while more than two-thirds still focus on PC and video games consoles (Table 1).[27]

At a global level these trends are already impacting on the allocation of development resources by publishers, who are shutting down or restructuring their console and PC studios to refocus on emerging areas.[28] There is a real risk that independent and publisher-owned UK video games studios with a successful track record in traditional 'offline' gaming platforms will be left behind (Table A2 on page 10 summarises the different business models that are prevalent in video games markets).

3. External project finance as an emerging model for the finance of video games development

Differently from video games, other creative industries such as film and TV have developed project finance models that draw on external finance as well as publishers operating inside the sector. With a portfolio of financing options, film and TV production companies can tap more diverse sources of external finance with a wide range of appetites for risk. Some financiers such as banks have, for example, traditionally preferred to invest in lower risk film productions with completion guarantees (bonds) that insure them against risk, while other investors, often individuals (including angels from within the sector), have been willing to fund creative projects at earlier and riskier stages.

How does it work?

Where external project finance has been used to fund video games, a 'Special Purpose Vehicle' ('SPV') – usually a company or a partnership – is created and owned or controlled by the stakeholders. The IP under development is placed inside the SPV where it is protected from the problems that might emerge during the project.

Table 1: The future growth of video games markets, and the UK's position

	Console	PC	Web-based	Mobile
Projected annual growth rate in the market between 2008 and 2012	6.9%	-1.2%	16.9%	19%
Percentage of UK developers targeting the platform	65%	70%	33%	27%

Sources: PwC (2008) 'Global Media and Entertainment Outlook 2008-2012.' London: PricewaterhouseCoopers; TIGA (2009) 'State of the UK Video Game Development Sector.' London: TIGA.

24. NESTA (2009) 'Time to Play.' London: NESTA; also Wi, J.H. (2009) 'Innovation and Strategy of Online games.' London: Imperial College Press.
25. They can also acquire independent studios with the right capabilities – the recent acquisition of UK social gaming business PlayFish by Electronic Arts is an example of this.
26. Games Investor Consulting (2008) 'Raise the Game.' London: NESTA; also Freeman, W. (2009) Rick Gibson: UK studios are ignoring the online opportunity. 'Develop.' June 8. Available from: http://www.develop-online.net/news/32118/Rick-Gibson-UK-studios-are-ignoring-the-online-opportunity [Accessed 17 February 2010].
27. TIGA (2009) 'State of the UK Video Game Development Sector.' London: TIGA.
28. Alexander, L. and Remo, C. (2010) THQ Cuts 60 Jobs As Rainbow, Juice Rebrand, Refocus On Digital. 'Gamasutra.' 2 February. Available from: http://www.gamasutra.com/view/news/27090/THQ_Cuts_60_Jobs_As_Rainbow_Juice_Rebrand_Refocus_On_Digital.php [Accessed 4th February 2010]; also Graft, K. (2009) EA: 'No Coincidence' That Layoffs, PlayFish Buy Emerged Simultaneously. 'Gamasutra.' 12 November. Available from: http://www.gamasutra.com/view/news/26058/EA_No_Coincidence_That_Layoffs_PlayFish_Buy_Emerged_Simultaneously.php [Accessed 4th February 2010].

For example, if the studio in charge of producing the video game becomes insolvent, a different one can be contracted to finish it. A set of legal contracts are then set up to establish the responsibilities for the funding, development and exploitation of the project, as well as the allocation of the returns that it generates. Under some variations of the model, a completion bond insurance policy can be signed in order to insure some of the risks of the project. A project manager represents the interests of the investor or the bond-holder, ensuring that development goes according to plan.

There are many types of video games project finance instrument available, differing in the balance of risk exposure relative to potential returns for investors,[29] as well as in the amounts of finance that are typically available for the development of the video game. They are briefly outlined in Table A3 on page 11 with some of the companies that are, or have been, involved in providing project finance listed in Table A4.

The present use of external project finance in UK video games development

Research by Fund4Games Software suggests that over ten companies have funded over 60 video games projects using external sources in the last ten years. Of these projects, 20 are known to have been substantially developed in the UK. Since 2005 at least £23 million has been invested through external project finance in the UK. Although by no means insignificant, this amount is tiny when compared to overall spending on video games development in the UK – £451 million in 2008 alone.[30]

External project finance can strengthen the UK video games sector

There are several reasons why extending the range of financing options to include a wider adoption of external project finance can help the UK video games sector grow:

- **Capitalising the UK video games sector:** External project finance models can make the video games sector more attractive to external investors because they enable them to invest in its activities in a more controlled manner than is possible with corporate investments. Performance outcomes are more readily observable to investors than when projects are bundled together.[31] By combining financial resources – including funds from government schemes – attached to different parts of the project, this model can also make it possible to reach scales of investment that would not otherwise be feasible.

- **Enabling studios to remain in control of their original IP:** Differently from the publisher funding models that dominate in the video games sector, external project finance creates opportunities for studios to keep control of the IP they generate during a project. This IP can subsequently be exploited through other channels, creating revenues that studios can then reinvest in innovation and growth.

- **Supporting innovation by UK video games studios:** There is a wide range of project finance models, some of which are suitable for projects with capital requirements below those that are usually attractive for equity investors such as venture capitalists. This means that project finance can help to fund less expensive projects targeting emerging video games markets such as low-budget mobile and casual online projects which may slip through venture capitalists' nets.

- **Improving the UK's publishing capabilities:** Project finance can also help publishers to pool their financial resources with other investors in order to fund the development of video games projects by UK studios. By enabling them to share risks with other financiers, this model can encourage publishers to invest in those riskier, more original projects in which UK studios have traditionally excelled.

- **Encouraging cross-media collaboration:** Film and television companies are increasingly keen to collaborate with businesses in the video games sector – Warner Brothers, the BBC and Channel 4 are all already active in this space. The adoption by the video games sector of project finance models that are prevalent in these other creative industries can increase the potential for cross-media funding packages.

But there are barriers to the wider adoption and positive impacts of this financing model

There are several barriers to the wider adoption, and realisation of the benefits, of external project finance models for video games development in the UK:

- Nearly all of the investments through external project finance models in the UK to date have targeted publishers, rather than studios. This is because publishers tend to be financially stronger, and also better

29. This partly depends on whether the finance is provided as working capital which is repaid once the video game is completed, or as equity investments in the project which are repaid out of royalties or other income generated by the video game.
30. Games Investor Consulting (2008) 'Raise the Game.' NESTA: London.
31. Esty, B. (2004) Why study large projects? An introduction to research on project finance. 'European Financial Management.' 10:2.

at ensuring the effective exploitation of the completed video game through their management of sales and distribution channels. In addition to this, publishers have large finance and legal teams which means they can establish and manage project finance partnerships more effectively.

- Unlike in other media sectors, such as film, the participation of project finance companies in video games development is rarely acknowledged.[32] This means that many video games businesses, particularly studios, are unaware of the existence and potential benefits of this finance model.

- Video games have different risk profiles from other creative industries such as film. In particular, the production timescales involved are longer (lasting from 12-24 months), and the projects invariably present technological – as well as creative – risks.[33] In the case of the film industry, there are specialists with the skills required to manage production risks, and if necessary to intervene and finish a project.[34] These skills are less well developed in the video games industry. This also means that support services to manage the risks of video games projects, such as completion bonds, are more difficult and costly to access.

- As currently configured, Venture Capital Trusts (VCTs) and the Enterprise Investment Scheme (EIS) are intended as vehicles for investments in businesses, not projects. VCTs can only invest up to 50 per cent of the value of the project and any project is limited to a total of £8 million. VCTs can only invest in ordinary shares, which forces the SPV to be constituted as a limited company involving more overhead and management than is required for a partnership structure – the preferred form for SPVs. High fixed costs as a consequence of regulatory requirements mean that VCTs cannot be set up economically to fund a small number of projects.[35]

- EIS investments are also constrained by restrictions on the size of the vehicles (£8 million in total, fewer than 50 employees).[36] Any investment through a combination of VCT and EIS schemes can be no more than £2 million in any 12-month period. Although a number of video games companies have successfully made use of these schemes to fund projects, it is clear that this requires careful (and costly) planning to make sure the rules are satisfied.

- There can be significant fixed costs associated with the establishment of an external project finance facility: by comparison with traditional funding models in the industry, there are more parties involved, and with different motivations. This makes contracts more complex and costly to craft – in the range of £25,000 to £75,000 on the basis of the authors' experience. This can make projects of a smaller scale, particularly in some of the online and mobile markets where UK video games studios are lagging behind, currently uneconomical to fund using this finance model.

4. Conclusions and policy implications

Investing in the creativity and innovation of the UK video games sector

The stretched public purse over the coming years will make it very hard for the UK to follow the path of other development territories where video games businesses receive generous government tax breaks. UK studios will have to rely on private finance to remain creative and innovative. In this dynamic and ever-changing sector, these are the ultimate drivers of growth and sustainability.

This policy briefing has argued that an excessive reliance on publisher finance through work-for-hire and royalty advance models is making it increasingly difficult for UK video games studios to compete on the basis of their ingenuity and creativity, and to tap into new growth markets such as online and mobile. Alternative finance models, including external project finance, can fuel innovation and the retention of original IP needed for video games developers to grow their businesses.

But there are barriers for the wider adoption of external project finance in the UK video games sector. Arguably, as has been the case for film, video games will in time develop the skills and legal and other support services that make project finance more viable for UK studios. However, studios do not have the time to wait. Policy can help to remove some of the barriers to finance, enabling studios to innovate and compete in new markets. It can do so in the following ways:

- By raising awareness of external project finance instruments in the UK video games sector, particularly amongst studios. The government should finance networking events bringing together video games

32. Very often, the only indication that external finance has been used to fund a project is a mention in the game's credits.
33. NESTA (2008) 'Hidden Innovation in the Creative Industries.' London: NESTA.
34. Bates, J. and Rivers, O. (2007) 'Knowledgeable Capital: Barriers to investing in the Creative Industries.' London: Centre for Creative Business.
35. See http://www.hmrc.gov.uk/guidance/vct.htm
36. See http://www.hmrc.gov.uk/eis/

businesses and potential investors. One model worth considering is that of the Film Production Finance Market organised by Film London.

- The established application criteria – both in terms of scale and timeframe of investment – make it difficult for project finance investors to benefit from EIS, while VCTs, for their part, do not easily allow investment in projects. There is a real risk that video games might 'fall through the cracks' of existing models to encourage investment in high-growth sectors in the UK, or receive investments in a way which is less suited to their needs. The criteria for applicability for EIS and VCTs should be reviewed in order to determine how they might better encourage investments in the innovative activities of UK video games studios.

- The current legal costs of external project finance facilities make this model uneconomic for projects targeting some of the cheaper online and mobile markets where UK studios are lagging behind. It is important to develop standardised legal templates for project finance in video games development that lower these costs.

- There has been some talk of the potential creation of a public body with strategic oversight of the video games sector. Co-ordinating the development of legal standards for project finance, and creating a centralised repository of information about government schemes to support video games development across the UK, and their relevance to project finance, should be two of its functions.

- This briefing has explored ways that policy can remove barriers to private finance in the video games sector. Experience suggests however that public project finance – in the form of lottery and broadcaster money – also plays an important role in supporting UK film and television production. The economic importance of the UK video games sector, alongside film and television, is now widely acknowledged by everyone. It is time to redeploy some of this public project funding towards games development too.

Table A1: Established video games financing models

Financing Model	Summary	Benefits	Drawbacks
Self-funded	Studios with large cash reserves, or which produce games for smaller platforms, can self-finance development without the need to access other sources of funding. When the game is complete, they 'sell' the publishing rights to third parties.	The studio is in control of the development process. The studio can auction the publishing rights in order to reach a more favorable revenue agreement. The studio is more likely to retain ownership over the IP it generates.	Mostly suitable for smaller development budgets. There is a risk the studio will not be able to find a publisher for the video game once it is produced. The publisher has less incentive to invest in marketing the game.
Work-for-hire	A publisher commissions a video game from a studio for a fee that is not related to the revenue generated by the game.	Simple arrangement without the need to negotiate royalties. The publisher assumes the risk of project failure.	No additional reward if the video game performs well. The publisher retains ownership over the Intellectual Property which is generated. 'Work-for-hire' titles tend not to be original or innovative.
Royalty Advances	Studio and publisher agree to share the royalties earned from a video game and the publisher provides an advance (usually non-refundable) against these future royalties. This advance is paid with the fulfillment of pre-established milestones. When a game is released, the publisher shares the royalties with the developer, having first recouped the advance which has been paid.	Reduces studio uncertainty about the minimal revenue that will be received. Both participants benefit if the video game performs well. The publisher has strong incentives to promote the game.	If there are disagreements about whether a deliverable fulfils the milestone requirements, the studio can suffer cash flow shortages. There is potential for discrepancies between the royalties established initially and those that are passed on to studios. It is difficult to access publisher funding for truly original and thus risky video games. Publishers usually insist on keeping control over the Intellectual Property that is developed. Publishers often insist on a first option to publish sequel and derivative games. The model is less suitable for games not sold at retail.

Table A2: Video games development markets

Video games market	Average development costs	Average development time	Business Model	Risks for the studio
Off-the-shelf console (Wii, Xbox360, PlayStation 3) and handheld (PSP/DS)	£2m – £15m (console) £250,000 – £600,000 (handheld)	15-30 months (console) 6-12 Months (handheld)	Sale at retail.	Rigorous approval and certification process to access the platform. Potential restrictions to the distribution of the video game in other platforms. Substantial second-hand market.
Digitally distributed console (Xbox Live Arcade, PlayStation Network)	£60,000 – £250,000	4-8 months	Digital download-to-own.	Rigorous approval and certification process to access the platform. In some cases, restrictions on pricing.
Smartphone	£50,000 – £200,000	3-8 months	Digital download-to-own. Micro-transactions and sale of virtual items.	Approval and certification process to access the platform. Crowded market.
Mobile phone	£25,000 – £120,000	3-6 months	Digital download-to-own.	Crowded market. Technical fragmentation in the mobile market.
Off-the-shelf PC	£500,000 – £10m	9-24 months	Sale at retail. Digital download-to-own.	Technical fragmentation in the PC market. High levels of piracy. Large second-hand market.
Massively Online PC	£2m – £50m	12-24 months	Subscription. Free with paid premium services. Online advertising. Micro-transactions. Virtual objects.	Large operational costs after launch (support services, server hosting and bandwidth). Dominant subscription model limits the target market.
Casual PC	£25,000 – £100,000	3-9 months	Subscription. Free with paid premium services. Online advertising. Micro-transactions. Virtual objects.	Crowded market.

Table A3: Project finance models for funding video games development

Type	Key features	Benefits	Applicability	Drawbacks
Development Working Capital	Provides finance for development, but finance repayable on completion of development. Risks may be mitigated by a completion bond.	Funder is repaid regardless of commercial success of game.	Larger projects with budgets > £1m due to cost of setting up legal structures.	Few providers of such loans. Concerns over the quality and scope of completion bonds. Complex legal framework. Relatively low returns.
Equity share	Provide finance for development in return for share in royalty income.	Can produce extraordinary returns for the informed investor.	Projects of almost any size.	No guarantee of any return.
Prototype funding	Provide funding to get products to the stage whether other financiers will step in or where a publisher will commission further development.	Most level of investment required. Applicable to a portfolio approach.	Projects of almost any size, as only the first part (usually less than 10 per cent) of a project is funded. Approximately £20,000 – £200,000 is usually funded.	Inherently risky. Capital is quite expensive as funders need to recover losses on other prototypes.
Partial Models	A variant of either Development Capital or Equity share models where only a portion of the overall budget is funded.	Risk to funder significantly reduced. Can be used on a portfolio basis.	Larger projects due to costs of establishing structures.	Need to find remainder of budget. Complex legal framework.

Table A4: Companies servicing project finance

Role	Companies
Bond provider	Film Finances Limited, IFG
Banks	Barclays, Bank Leumi, HBoS
Project managers/monitors	Wise Monkey, Fund4Games, Attaction

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